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THOMAS ARCHIBALD SPRAGUE

1877 - 1958

J. Lanjouw (Utrecht)

Dr Thomas Archibald Sprague died on October 22nd, 1958, at the age of 81 years. The continually diminishing group of plant taxonomists who did such excellent work in the first part of this century suffered a heavy loss with this death. The importance of Sprague's work will be shown more clearly in an obituary notice by Mr Bullock in a coming number of Taxon. I want to give here a short personal appreciation.

I knew Sprague from 1930 onwards but a more close contact was established in the years 1934 and 1935 during the preparations for the VIth International Botanical Congress to be held at Amsterdam, and more especially of course during the work of the Nomenclature Section at that Congress. My first steps on the path of nomenclature were guided by my teacher, Sprague's contemporary Pulle. However, a more profound knowledge of the rules, of the way in which they should be expressed and applied, of what could and what could not serve as examples, and of many more aspects, I obtained from Sprague. I felt greatly honoured when he invited me in 1947 to succeed him as Rapporteur-Général. I felt I could only accept this invitation if I could count on his continued advice and interest in the early stages. This, he liberally bestowed upon me and I shall remain thankful to him for all he did to help me. It was a joy to see how Sprague and Merrill acted at conferences on nomenclature. They differed greatly in approach, in temperament and in character, but they shared a great love for our branch of science and also a wealth of knowledge of all matters that were brought into discussion. Sprague's appearance was characterized by a great liveliness, by an obvious love for his subject, by an intense perception of what was put forward by others, and by an unbelievable quickness at repartee. In the thick of the fight (he was never afraid to engage in a battle of words on a high intellectual level) he may sometimes have given a sharp reply to his opponent, but I am sure that in the end nobody resented such words for it was clear that any asperity always arose from the fact that he was giving a full one hundred percent of himself to defending a particular thesis or point of view. I am glad that I have known this man, and that I have been able to learn so much from him. I have been enriched by my association with him.

Our sympathy is of course with Mrs Sprague who, for such a long time, assisted her husband with such faith and ability in his scientific work.

COMMONWEALTH MYCOLOGICAL INSTITUTE
8 - JAN 1959

GUY RICHARD BISBY

17 August 1889 - 3 September 1958

G. C. Ainsworth (Kew)

There were two main phases in Dr. Bisby's career. For seventeen years up to 1936 he was Professor of Plant Pathology and Plant Pathologist at Manitoba Agricultural College, Winnipeg, and then (until his retirement in 1954) he was Senior Assistant Mycologist at the Commonwealth Mycological Institute, Kew. He published steadily throughout his working life on a variety of topics. There was a strong plant pathological bias up to about 1939, but he will be best remembered by members of this Association for his contributions to the taxonomy and nomenclature of fungi; some fifty books and papers which can be roughly divided into three categories.

First there is a series of compilations, mostly made in collaboration with others, and all of his co-authors would, I am sure, have willingly admitted that it was largely Bisby's unflagging energy and his impatience to see the routine aspects of the matter finished that brought their tasks to an early completion. The first of these compilations is a catalogue of the fungi of Manitoba, made primarily with Professor A. H. R. Buller and reflects the extensive collecting done by Bisby as a younger man. This appeared as a preliminary paper in 1922, as a little book in 1929, and as a larger and more ambitious volume in 1939. Subsequently there were lists of the fungi of India (with E. J. Butler), of Ceylon (with T. Petch), and of the pyrenomycetes, hyphomycetes, and finally the rusts of Great Britain. There was also the *Dictionary of the Fungi*, into the successive editions of which he put much work. His skill as a compiler was in frequent demand at the Commonwealth Mycological Institute where he produced the Institute's first list of tropical plant diseases and for more than a decade supervised the production of the *Index of Fungi*. These tasks were mostly undertaken with the minimum of clerical assistance and were only accomplished by maintaining a very regular pattern of work — an early start, a midday break for, weather permitting, an hour's gardening, and as a rule no mycology in the evenings but early to bed.

In spite of official duties Bisby also helped the British Mycological Society in numerous ways and single-handed, in the space of a few months, prepared an index to the first thirty volumes of that Society's *Transactions*.

Secondly there are Bisby's contributions to taxonomic mycology. One of his earliest interests, which brought him in contact with J. C. Arthur, was in rusts and he maintained an affection for this group throughout life. In a series of papers he dealt with the Hysteriales, and the Hyphomycetes, especially the genera *Stachybotrys* and *Trichoderma*, is another group to which he made notable contributions.

One of Bisby's strong points as a taxonomist was the ability to make without delay a working decision from the evidence available. This facility also stood him in good stead in his third and most recent interest which was nomenclature. He was by inclination a 'lumper' rather than a 'splitter' and without the restraining influence of the Code he would have eliminated many more names. As it was he compiled a list of generic names of fungi for rejection and put much energy at the disposal of the Special Committee for Fungi of which he was a member.

Dr. Bisby was of a retiring disposition, he was rarely seen at meetings and never, I believe, attended an international congress. He had, however, many friends and correspondents by whom he will be long remembered on both sides of the Atlantic.

[Some further details about Dr. Bisby will be found in *Nature, Lond., 192*, 4641, p. 987, 1958.]

A LOGICAL APPROACH TO THE CODE*

Paul C. Silva (Urbana, Illinois)

Even to the analytical mind usually attributed to a taxonomist, reduction of the Code to a logical, readily understandable outline is a formidable challenge. Despite the commendable work of the Editorial Committee, the Paris Code (1956) leaves something to be desired in the formulation of "a precise and simple system of nomenclature," which according to the Preamble is required by botany.

Five logical steps in the use of nomenclature to express taxonomic relationships present themselves clearly in my mind:

(i) the establishment of a system of taxonomic categories; (ii) the formulation of names for particular categories; (iii) the publication of names; (iv) the application of names; and (v) the selection of correct names.

A system of taxonomic categories is clearly set forth in Chapter I, based on the principle that every plant is treated as belonging to a number of taxonomic groups of consecutively subordinate ranks, among which the rank of species is basic. The formulation of names is based on two principles: that [scientific] names are Latin or are treated as Latin; and that names of taxa of the rank of genus and above are monomial, names of taxa of the rank of subgenus down to and including species are binomial, and names of taxa of the rank of subspecies and below are trinomial [the second principle is an extension of the concept of "binomial nomenclature"]. The publication of names concerns the methods of dissemination which are accepted as making those names available for use by all botanists. The principle of valid [including effective] publication forms the basis of this process. Unlike the preceding two operations, the next two operations are the concern of all botanists rather than just of the originators and publishers of names; they proceed in a vast field to which innumerable authors have contributed over a period of two centuries. The application of names formerly was determined by the circumscription method, but the current Code unequivocally requires that names of taxa of the rank of order and below be applied in accordance with the type method. Finally, the selection of correct names is based on three principles: (i) that a taxonomic group with a given circumscription, position, and rank can bear only one correct name; (ii) that the selection of the correct name for a particular taxonomic group is based on priority of publication among names and epithets that are in accordance with the Code; and (iii) that priorability of names of taxa of the rank of order down to and including genus can be set aside by special legislation (conservation).

In the Preamble it is stated that "The *Principles* form the basis of the system of botanical nomenclature." A survey of the six principles set forth in the Paris Code reveals, however, that one of them (I) is an unintentional half-truth, one of them (III) is an ambiguous and partial statement of another (IV), while no mention is made of four fundamental concepts stated above which I consider worthy of recognition as principles.

Although the Preamble rightly points out that botanical nomenclature deals with a system of taxonomic groups on the one hand and with names for particular groups on the other, the fundamental concept underlying the establishment of the system of categories is stated as a rule (Art. 2) rather than as a principle.

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* Nomenclature proposals submitted to the Montreal Congress, XXIII.

263. I should like to propose a *new principle,* as follows:

"Every plant is treated as belonging to a number of taxonomic groups of consecutively subordinate rank, among which the rank of species is basic."

Principle I is faultily conceived if properly worded, and faultily worded if properly conceived. The qualifying clause, "in the sense that the name of a plant must not be rejected merely because it is identical with the name of an animal," implies that in all other respects botanical and zoological nomenclature are not independent [therefore dependent], a highly questionable implication. The interrelationship between the two systems of nomenclature has been the concern of several international botanical congresses. The high point of both truth and practicality, in my opinion, was the legislation approved at Wien in 1905: "The principles and forms of nomenclature should be as similar as possible in botany and in zoology; but botanical nomenclature is entirely independent of zoological nomenclature." The low point is the current Code, in which references to the zoological code are either meaningless, unnecessarily intricate, or mutually incompatible, and all contrary to the tacit principle that the botanical code governs the nomenclature of plants rather than animals.

In the Paris Code of 1867 the only reference to zoological nomenclature appears in Article 5: "Les principes et les formes de la nomenclature doivent être aussi semblables que possible en botanique et en zoologie." At the Wien Congress two proposals were considered, neither of which was approved: first, an elaboration of the existing statement; second, a long statement, approximately reciprocal to that which formed Article 1 of the zoological code, outlining interrelationships between the two systems of nomenclature. In place of the latter proposal, a diametrically opposed point of view was incorporated into the Code, as indicated above. At the Cambridge Congress, the British botanists proposed that this article be completely revised and offered as a substitute an exactly reciprocal wording of Article 1 of the official English translation of the zoological code promulgated in 1905. This proposal clearly would have provided a loophole for avoiding the requirement of Latin diagnoses, inasmuch as the zoological names of an organism transferred from the animal to the plant kingdom would have been accepted in botanical nomenclature with their original zoological status. The article as approved at Cambridge, incorporating the Janchen amendment, reads as follows: "Botanical nomenclature is independent of zoological nomenclature in the sense that the name of a plant is not to be rejected simply because it is identical with the name of an animal. If, however, an organism is transferred from the animal to the plant kingdom, its validly published names are to be accepted as botanical nomenclature in the form prescribed by the rules of botanical nomenclature, and if an organism is transferred from the plant to the animal kingdom, its names retain their status in botanical nomenclature." This version is ambiguous in two respects. First, the words "form prescribed by the rules of botanical nomenclature" may be interpreted to mean merely the proper formulation [e.g., the proper ending] of a name or it may be interpreted [I believe incorrectly] to include requirements for valid publication. Second, deletion from the original proposal of the words "with their original zoological status" places the date of valid publication in doubt. At Stockholm this article [Art. 6] was reworded slightly so that "is not to be rejected simply" became "must not be rejected merely."

While some workers looked upon this rule as a loophole for avoiding the requirement of Latin diagnoses, Lund [Taxon 2: 18. 1953] expressed dissatisfaction in that it might be interpreted as requiring names of taxa described as animals to be supplied with Latin diagnoses in order to qualify as valid botanical names and

moreover that it failed to include organisms not initially considered to be either plants or animals. In view of Lund's first objection, Boivin [Taxon 3: 56. 1954] proposed a change which clearly would have made this rule a loophole for avoiding Latin diagnoses. At the Paris Congress there was talk about cooperation between protozoologists and phycologists in applying the rule of priority to taxa described by one or another group of workers [cf. Taxon 4: 127. 1955]. Actually, such cooperation is precluded by the very fact that the zoological and botanical codes govern the nomenclature of mutually exclusive kingdoms of organisms [1], and the decision of which code to follow rests entirely on taxonomic opinion. Any taxon which is considered to be composed of animals by one worker and of plants by another worker may, and sometimes does, bear two different correct names. Boivin's proposed clarification of the loophole for avoiding Latin diagnoses was not generally acceptable to mycologists, and the final wording of the contents of this article [distributed in the Paris Code among Principle I, Article 45, and Article 64(3)] is so compromised as to be unintelligibly intricate to the average user of the Code, yet perfectly clear to the phycologist that this is a loophole for avoiding Latin diagnoses in the algae. Postponement of the requirement of Latin diagnoses for new taxa of algae until 1 Jan. 1958 [Art. 34 of the Paris Code] obviated the usefulness of this loophole to phycologists for names published prior to that date. Continuance of this loophole, however, vitiates Article 34, and future discussions of the Latin requirement in algae should certainly be in connection with Article 34 rather than with the subterfuge Article 45.

264. Therefore, I should like to propose that the third paragraph of Article 45 be deleted and that the following principle be substituted for *Principle I:*

"The Code applies equally to taxonomic groups of plants whether or not they were originally assigned to the plant kingdom."

As indicated above, the formulation of names is based on two fundamental concepts which seem worthy of recognition as principles. Principle V states that "Scientific names of plants are Latin or are treated as Latin." While the use of the adjective "scientific" and the choice of the word "plants" rather than "taxonomic groups" are questionable, I do not agree with the alternate wording proposed by St. John [Taxon 6: 297. 1957. "Scientific names of plants are commonly Latin or Greek, or if from other languages, they are often latinized."]. Not only does this proposed version by use of the words "commonly" and "often" change the force of the statement from a principle to a characterization, but it shifts emphasis from grammar to etymology. Differences of interpretation seem to stem from the meaning of the words, "treated as Latin." I do not consider this the same as "latinizing." For example, *Andropogon* is purely a transliteration from Greek, and yet in binomials it is treated as Latin (but not latinized) to the extent that the specific epithet must accord with the rules of Latin grammar as governed by the grammatical attributes [number and gender] of the generic name. In the binomial *Andropogon leucopogon* the epithet is a Greek word in the nominative case standing in apposition to the generic name; "treatment as Latin" therefore has no practical significance in this instance. Similar considerations apply to *Andropogon gidarba*, composed of

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[1] The International Bacteriological Code of Nomenclature governs the nomenclature of "bacteria, related organisms, and the viruses," which are considered distinct from both animals and plants. Bacteria, however, are explicitly included in the plant kingdom by the International Code of Botanical Nomenclature.

a Greek generic name and a barbaric epithet in apposition. But in the combinations *Andropogon mannii, A. smithianus,* and *A. filifolius* we see a progressively more conspicuous treatment of the name as Latin.

265. I should like to propose that *Principle V* be changed to read as follows:

"Names of taxonomic groups are treated as Latin irrespective of their derivation."

A second principle upon which the formulation of names is based is the so-called Linnaean binomial [binary] system. It is curious that this concept, which finds its way into almost all elementary biology teaching, should be omitted from the list of principles in the Code.

266. I should like to propose that the following *principle* be added to the Code:

"Names of taxonomic groups of the rank of genus and above are monomial; names of taxonomic groups of the rank of subgenus down to and including species are binomial; names of taxonomic groups of the rank of subspecies and below are trinomial."

Such examples in the Code as "*Euphorbia* sect. *Tithymalus* subsect. *Tenellae*" [Art. 21] and "*Saxifraga aizoon* var. *aizoon* subvar. *brevifolia* forma *multicaulis* subforma *surculosa*" [Art. 24] would seem to be in disagreement with the preceding proposed principle, but the conflict is apparent rather than real. Article 21 states that "The name of a subdivision of a genus is a combination of a generic name and a subdivisional epithet," thus clearly indicating a binomial, and this interpretation is reinforced by the provision that "two subdivisions of the same genus, even if they are of different rank, cannot bear the same epithet unless they are based on the same type." Thus the example cited above is apparently a trinomial, but fundamentally a binomial expressible as *Euphorbia* subsect. *Tenellae.* Similarly, Article 27 provides that "Two infraspecific taxa within the same species, even if they are of different rank, cannot bear the same infraspecific epithet unless their names are based on the same type," thus supporting the view that infraspecific taxa bear names that are fundamentally trinomial, even though their expression may be elaborated into polynomials with as many as eight terms.

The fundamental concept upon which the publication of names is based is not at present listed among the principles.

267. I should like to propose the addition of the following *principle:*

"Names of taxonomic groups have no status under the Code unless they are validly published."

Principle II states precisely the fundamental concept underlying the application of names and no change is suggested.

Principles III and IV govern the selection of correct names. Principle III is not only ambiguous, but its meaning, when finally ascertained, is seen to be encompassed by Principle IV. The phrase, "naming of taxonomic groups" ["dénomination des groupes taxonomiques"; "Benennung taxonomischer Gruppen"], can be construed to mean the formulation of names, the application of names, or the selection of correct names. The first choice seems to me most appropriate, but this as well as the second choice results in a false statement: neither the formulation nor the application of names is based on priority of publication. The selection of correct names *is* based on priority, but this idea is clearly stated in Principle IV, which combines two fundamental concepts and suggests a third. The wording of Principle

IV is also ambiguous in the sense that the qualifying phrase, "except in specified cases," may refer equally to the nine families for which two correct names are permitted [Art. 18, Note 2] or to legitimate names whose priorability has been set aside by conservation. In order to remove this ambiguity, I should like to propose that the existing principle be divided into three new *principles,* as follows:

268. "Each taxonomic group with a given circumscription, position, and rank can bear only one correct name."

269. "The correct name of a taxonomic group is the earliest name or combination of the earliest epithet that is in accordance with the Code."

270. "In the selection of correct names, the principle of priority of valid publication may be superseded by special legislation (conservation)."

Principle VI [retroactivity] is fundamental to the operation of the entire Code and logically may be placed either first or last in the list of principles.

Proceeding to the Rules, Chapter I is seen to deal completely with the ranks of taxa and the terms denoting them, as indicated by its title. The remaining chapters are less well organized and their arrangement is not wholly logical. Chapter II, "Names of taxa (general provisions)," deals with the application of names [the type method] and incompletely with the selection of correct names [priority and its limitation by starting-points and conservation]. Formulation of names is not dealt with until Chapter III, "Nomenclature of taxa according to their rank." The parts of Chapter III dealing with formulation of names include Recommendation 16A [but not Art. 16] and Articles 17 through 28 with included recommendations. Parts of Chapter V, "Retention, choice, and rejection of names," also deal with formulation of names: Articles 68, 69(3), 70(2-4), and 71. Finally, Chapter VI "Orthography and gender of names," also governs the formulation of names. The publication of names is treated in a more orderly manner, effective and valid publication being defined in Sections 1 and 2, respectively, of Chapter IV. The application of names is treated by Section 2 of Chapter II. Selection of correct names is governed by Articles 11 through 15 of Chapter II, Article 16 of Chapter III, and all of Chapter V.

271. In the interest of ease of understanding and use of the Code, I should like to propose that the Editorial Committee be authorized to rearrange the various parts of the Code, incorporating changes approved at Montreal, so as to present in orderly manner the principles, rules, and recommendations governing (i) the establishment of a system of taxonomic categories, (ii) the formulation of names for particular categories, (iii) the publication of names, (iv) the application of names, and (v) the selection of correct names, in this sequence.

The concept that at certain ranks a taxon which includes the type of the next higher taxon shall bear as its epithet the name or epithet of that taxon was introduced at Stockholm. In the Stockholm Code, Article 32 applied this concept to subgenera, Article 35 to all infraspecific taxa. At Paris the concept was extended to include sections [Art. 22 of the Paris Code]. Extension to include subsections, series, and subseries is made impracticable by the form of the epithet which is recommended for those categories — a plural adjective rather than a substantive. This introduction of tautonymy into the Code has not received full approval [cf. proposals by Wherry and by Rowley, Taxon 7: 152 and 153, respectively. 1958]. As long as it is retained in the Code, however, it seems logical to carry it two steps further, extending it to include suborders and subdivisions of a family [subfamilies, tribes, and subtribes]. Before making this proposal, however, it is desirable to review the rules pertaining to the nomenclature of higher taxa.

I have already pointed out that Article 16 is misplaced in the sense that it deals with the application of names and the selection of correct names rather than with the formulation of names. Recommendation 16A, however, is properly placed.

The wording of Article 17 presupposes that the type must be known before an ordinal name can, or could, be formulated. Prior to 1 Jan. 1958, however, this was not true. An ordinal name was proposed, usually without indication of type, to be lectotypified later in accordance with Article 9. Reference to the type method is out of place in Article 17, just as it is in Article 18 [families] and Article 19 [subdivisions of a family]. At present, ordinal names can be based on illegitimate family names, just as family names can be based on illegitimate generic names. Surely such an acceptance of illegitimacy as the basis for a legitimate superstructure strikes at the integrity of the Code and should be rectified.

272. I should like to propose that *Article 17* be changed to read as follows:

"The name of an order is based on the stem of any legitimate name of an included family and has the ending *-ales*.

A suborder is designated in a similar manner, with the ending *-ineae*, except that the name of a suborder which includes the type of the order to which it is assigned must be based on the same stem as the ordinal name, but, contrary to Article [46], without citation of an author's name.

Note 1. An ordinal or subordinal name based on the stem of an illegitimate name of a family is illegitimate."

[Examples unchanged]

Similar proposals for Articles 18 and 19 follow:

273. *Article 18:* Delete first sentence and substitute the following:

"The name of a family is a plural adjective used as a substantive; it is formed by adding the suffix *-aceae* to the stem of any legitimate name of an included genus."

Add new note and renumber existing notes:

"Note 1. A name of a family based on the stem of an illegitimate generic name is illegitimate."

[Note 2. When a name of a family etc.]

[Note 3. The following names etc.]

274. *Article 19:* Delete first paragraph and substitute the following:

"The name of a subfamily is a plural adjective used as a substantive: it is formed by adding the suffix *-oideae* to the stem of any legitimate name of an included genus.

A tribe is designated in a similar manner, with the ending *-eae*, and a subtribe similarly with the ending *-inae*.

The name of any taxon of a rank below family and above genus which includes the type of the next higher taxon must be based on the same stem as the name of the next higher taxon, but, contrary to Article [46], without citation of an author's name."

Proskauer[2] has proposed [Taxon 7: 215. 1958] that names of families be based only on correct generic names, but in my opinion it is inimical to the Code to base legitimacy on correctness. To the contrary, correctness should be strictly a matter of taxonomic opinion operating within the limits of legitimacy. I agree with Proskauer that Article 61 is unworkable. Only those instances which conform to this

[2] I should like to thank Dr. Proskauer for the courtesy of permitting me to read his manuscript.

rule are identifiable; one which does not conform may be considered alternatively as a proposal of a new taxon [governed by Art. 32-38 and 44] rather than as a change in rank of an existing taxon.

275. As an alternative to Proskauer's proposal, I should like to propose that *Article 61* be deleted without the adoption of a substitutional text.

Note 3 of Article 7 prohibits the selection of lectotypes or neotypes for illegitimate names, despite the necessity for doing so in such instances as indicated in Note 4 of the same article! In addition to supporting Fosberg's proposal to eliminate the clause, "unless its name must already be rejected under this Code" [Taxon 7: 149. 1958], I should like to point out two discrepancies in the different linguistic versions of this note: first, the meaningless "already" is also found in the German text ["bereits"] but not in the French or Spanish texts; second, the clause "a substitute for it may be chosen" in Spanish becomes "must be chosen" ["se le debe escoger un sustituto"].

Note 4 of Article 7 was taken into the Paris Code from Appendix I of the Stockholm Code with a curious inversion of wording, purportedly to make the note comprehensible [cf. Taxon 4: 133. 1955], but which actually introduced an error in syntax and hence ambiguity. For me the meaning of the Stockholm version is clear: "When a new name or epithet was published as an avowed substitute (*nomen novum*) for an older one, which is not available, the type of the new name is automatically that of the old one." The Paris version, "the type of the old name is automatically that of the new one," because of the syntactic error of shifting the point of view gives the impression that we are legislating the type of the old name rather than the new. The French version is clearer: "le type du nom ancien devient automatiquement celui du nom nouveau"; but the Spanish version is still clearer because it is syntactically correct: "el tipo del nuevo nombre es, automáticamente, el que tenía el nombre más antiguo." The purpose of the clause "which is not available" qualifying "an older [name]" is not apparent to me. All avowed substitute names, whether legitimate or illegitimate, should be typified in accordance with this note. In fact, the illegitimacy of substitute names which are not homonyms can be established only through typification [cf. Art. 64(1)].

276. In view of the preceding discussion, I should like to propose that *Note 4* of *Article 7* be changed to read as follows:

"A new name or epithet published as an avowed substitute (*nomen novum*) for an older name is typified by the type of the older name."

According to the note to Article 10, "For plants of which it is impossible to preserve a type specimen, or for a species without a type specimen, the type may be a description or figure." This note is impracticable in the sense that it can hardly be maintained that there exists any plant "of which it is impossible to preserve a type specimen." Those workers who deal with forms which unfortunately do not retain or exhibit sufficient essential characters when preserved to be of diagnostic value or for which type preparations often or usually have not been made or preserved, must weigh evidence from several sources in order to arrive at a decision regarding the application of a particular name [cf. Silva and Starr, Svensk Bot. Tidskr. 47: 235. 1953]. However, as long as a holotype specimen is extant, the original description and figures are subservient to it [and may even be at odds with it]. In the absence of a holotype specimen, a lectotype or neotype may be chosen. This provision for a substitute type and the fact that its selection is governed

by the description and, presumably, figures [cf. Art. 8] would seem to obviate the necessity of permitting descriptions and figures to substitute for plants, a practice which is scarcely defensible.

277. I should like to propose that *Article 10* be emended as follows:

In the first sentence, delete the words: "or other element." Delete the Note.

According to Article 48, "When a name is conserved so as to exclude its type ... the name of the author whose circumscription is conserved must be cited." This wording is contrary to the type method, and specifically to Note 2 of Article 14, which states that "The application of both conserved and rejected names is determined by nomenclatural types." A circumscription cannot be conserved, but rather an application of a name as determined by a designated type. As Article 48 is now worded, the emphasis is on conservation, which is incorrect inasmuch as the section containing this article deals with citation of authors' names. Moreover, the method of citation specified in Article 48 holds for all such names, whether or not they are conserved.

278. I should like to propose that *Article 48* be substituted as follows:

"Publication of a treatment of a taxon which purposely excludes the original type is considered as publication of a new taxon, the name of which is a later homonym ascribed solely to the emending author.

Example: *Lemanea* as treated by Sirodot (1872) explicitly excluded the type of *Lemanea* Bory (1808) and hence must be cited *Lemanea* Sirodot rather than *Lemanea* Bory emend. Sirodot.

Note. Retention of a name in a sense that excludes the type can be effected only by conservation.

In this connection, Article 51 should be reviewed. A change of position or of rank of a taxon is independent of "an alteration of the diagnostic characters or of the circumscription of a taxon." Moreover, the important idea that exclusion of the type necessitates a change in name has been omitted.

279. I should like to propose that *Article 51* be changed to read as follows:

"An alteration of the diagnostic characters or of the circumscription of a taxon does not warrant a change in its name, except as required (1) by exclusion of the original type (Art. 48) or (2) by its union with another taxon of the same rank bearing an older legitimate name or epithet (Art. 57)."

[Examples unchanged]

The first paragraph of Article 64(3) curiously denies the priorability of valid publication established in Article 45. This indulgent safeguard for names of unequivocal plants against late arrivals from another kingdom was not part of Boivin's proposal, but it found its way into the resolution formulated at Paris by a joint meeting of mycologists and phycologists which was used by the Editorial Committee in arriving at the final wording. The second paragraph of Article 64(3) was first adopted at Cambridge, but it is contrary to the provision of Principle I that the name of a plant must not be rejected merely because it is identical with the name of an animal. For example, *Ceramium cancellatum* C. Ag. (1824), applied to a red alga, in accordance with Article 64(3) must be rejected as a later homonym of *C. cancellatum* (L.) DC. (1804-1805), even though the latter is the name of an animal [a bryozoan; cf. Papenfuss, Journ. S. Afr. Bot. 17: 178. 1952]. In addition to being contrary to Principle I, Article 64(3) is also contrary to common sense. It

cannot be emphasized too strongly that the botanical code is designed to govern the nomenclature of plants rather than animals and should not be complicated by taxonomic vicissitudes. A name should enter into consideration of one or the other code depending only upon the taxonomic placement of the type and not whether it was originally considered applicable to plants or to animals or whether at any time in its taxonomic history it has been transferred from one to another kingdom. The effect of a strict interpretation of Article 64(3) on the preparation of text for the Index Nominum Genericorum is too profound to be more than merely mentioned at this time, but in brief, nomenclature thereby is needlessly implicated with taxonomic history. There is no good reason why a name of a plant originally classified as an animal should not compete on the same terms with a name of a plant originally classified as a plant: the only consideration should be that, in the opinion of the person using the code, both names apply to plants. Similarly, merely because a taxon was originally assigned to the plant kingdom is not a good reason for allowing the name of an animal to cause rejection of a name of a plant: the only consideration should be that, in the opinion of the person using the code, one name applies to an animal, the other to a plant, and therefore the two names, being governed by different codes, are non-competitive.

280. In view of the preceding discussion and in the interest of adherence to principles, common sense, and practicability, I should like to propose that *section* (3) of *Article 64* be deleted.

NOMENCLATURE PROPOSALS FOR THE MONTREAL CONGRESS

XXIV. PROPOSALS BY C. V. MORTON (Washington, D.C.)

281. Proposal for Change of Example under *Article 6.*

The example given for legitimate and correct names is *Leptostachya* Nees and *Dianthera* L. I suggest that a better and clearer example can be found. For one thing, the Note states that *Leptostachya* is "based on *L. virgata* Nees," suggesting that this species is unequivocally the type, but this is not true. No type was originally indicated, and there were six species referred to the genus. The species *L. virgata* can at best be only a lectotype, and *L. wallichii* might perhaps be considered an equally good choice. The Note goes on to say that "Bentham reduced *Leptostachya* Nees to *Dianthera* L." This is probably technically true. But the fact is that Nees' concept (at least in the DC. Prodromus treatment) was confused, and Bentham actually split up the species of *Leptostachya* between *Dianthera* and *Justicia.* There is the further complication that the taxonomic validity of *Dianthera* itself is debatable; for instance Fernald (in Gray's Manual, 8th ed., 1308. 1950) and Leonard (Contr. U.S. Nat. Herb. 31: 487. 1958) consider it a synonym of *Justicia.* The examples given in the Code ought to be as simple, uncomplicated, and undebatable possible. Therefore, I suggest that the example of *Leptostachya* and *Dianthera* be deleted and the following substituted; [1]

Example: The generic name *Cashalia* Standley (Journ. Washington Acad. Sci. 13: 440. 1923), based on the single species *C. cuscatlanica,* is legitimate because it is in accordance with the rules. The same is true of the generic name *Dussia* Krug & Urban (ex Taubert in Engl. & Prantl, Nat. Pflanzenfam. III, Abt. 3: 193. 1894), based on the single species *D. martinicensis.* Both generic names are correct when the genera are thought to be separate. Steyermark (Fiel-

[1] I chose this example as it came readily to my mind. Others equally simple and appropriate can be found easily.

diana: Botany 24, pt. 5: 248. 1946) however, reduced *Cashalia* Standley to *Dussia* Krug & Urban; when this concept is accepted the latter name is the only correct one for the genus with this particular circumscription. The legitimate name *Cashalia* may therefore be correct or incorrect according to different concepts of taxa.

282. Proposal for minor emendation of *Article 11.*

The Note appended to this Article is new with the Editorial Committee. It reads: "The name of a taxon below the rank of genus, consisting of the name of a genus combined with one or more epithets, is termed a combination." The examples are of species, varieties, and formae. The Editorial Committee certainly did not intend to imply that these are the only classes of combinations, but it does rather suggest it. The epithet of a subgenus or section together with the name of its genus is a combination (cf. Art. 21), and examples of these should be added. I propose adding to the examples: *Mouriri* subg. *Pericrene* [1] and *Arytera* sect. *Mischarytera.* [2]

283. Proposal regarding *Article 13.*

The Article deals with the starting dates for the different groups of plants. Note 4, reading, "For nomenclatural purposes names given to lichens shall be considered as applying to their fungal components," seems surely misplaced here, as this is not a question of dates. It would seem to find its proper position in Chapter III, Section 4. "Names of genera and subdivisions of genera" as a Note (or footnote).

284. Proposal for minor emendation in *Article 21.*

This Article deals with the names of subdivisions of genera. As an example of a subgenus is cited *Banisteria* subg. *Hemiramma.* The examples in the Code ought to be of correct names, and therefore *Banisteria* is a poor choice, for *Banisteria* is a *nomen rejiciendum.* There are any number of entirely correct examples that might be substituted. I propose *Costus* subg. *Metacostus.* [3]

[1] Of Morley.
[2] Of Radlkofer.
[3] Of K. Schum.

285. Proposal for emendation of *Article 22.*

Article 22, as originally worded at Stockholm (Art. 32, Stockholm Code), provided that the subgenus containing the type species of the genus should repeat the generic name unaltered, but this concept was expanded by the Paris Congress so that not only the subgenus concerned should repeat the generic name but also the section containing the type species, i.e. the type species of Alpinia being *A. galanga,* the subgenus and section containing this species should be known as *Alpinia* Subg. *Alpinia* sect. *Alpinia* rather than *Alpinia* subg. *Autalpinia* K. Schum. sect. *Hellenia* K. Schum. This being a decision of the Congress, it has to be abided by.

At the Paris Congress, M. Leonard suggested that the "type" section of every subgenus bear the subgeneric name unaltered. This was not extensively discussed, and it was not put into the form of a motion or voted on. Nevertheless, it has been included in the published Code, reading: "Similarly, a section including the type species of any subgenus must bear as its epithet the correct epithet of the subgenus." The example cited is: "The section of the genus *Mouriri* Aubl. containing the type species of the subgenus *Taphroxylon* Morley (*M. acutiflora* Naudin) must be called *Mouriri* subg. *Taphroxylon* Morley sect. *Taphroxylon* and not sect. *Acutiflos* Morley." It is a little doubtful if the full implications have been realized. The section is the traditional subdivision of the genus, as for instance in Bentham and Hooker, Genera Plantarum, and in much of Die Natürlichen Pflanzenfamilien, and in many genera subgeneric names have never been proposed. It would be quite possible for someone to take a genus like *Columnea* and propose a new subgeneric classification adopting all new subgeneric names and thereby invaliding and deleting at one stroke all the well-known sectional names like *Collandra, Pentadenia, Ortholoma* and so forth. Literally hundreds of sectional names could be invalidated by this provision. [1] It is unnecessary, for botanists have got along very

[1] It is true that most workers, being guided by traditional procedures, would adopt validly published sectional names as subgeneric names if they were proposing a new subgeneric classification, but there is nothing in the Code absolutely requiring this. Article 60 is very definite that epithets have priority only within their own rank.

well so far without any such rigid and artificial system, and it is not by any means a basic principal of the nomenclatural type method but just one way of doing things, not necessarily better or more precise than the traditional way. I propose that the sentence and example quoted above be deleted from the Code. I believe that they have no status under the Code in any case, since they are an unauthorized addition of the Editorial Committee. The Committee was authorized to make changes in wording not involving changes of meaning; in this case it is not a question of a mere verbal change but of a fundamental alteration of the Rules.

286. Proposal for minor emendation in *Article 23.*

This Article, dealing with the names of species, says (in part): "The specific epithet, when adjectival in form and not used as a substantive, agrees grammatically with the generic name." After examples of masculine, feminine, and neuter adjectival epithets (*Helleborus niger, Brassica nigra, Verbascum nigrum*) occurs the example *Rubus amnicola.* This is correct as an example of a specific epithet that is a substantive, but it could be made clearer to those lacking a classical background, for on the surface it might appear to be similar to *Quercus nigra,* where *Quercus* is feminine in spite of ending in "-us" and consequently takes a feminine adjective. *Rubus* is masculine and *amnicola* is not an adjective but a substantive meaning "a dweller by a river." I propose adding after "*Rubus amnicola*", "the specific epithet being an invariable Latin substantive."

287. Minor emendation in *Article 31.*

In the example is mentioned "Lundell & Nannfeldt, Fungi Exsiccatae Suecici." "Exsiccatae" is an error for "Exsiccati."

288. Proposal for an orthographic emendation in *Article 32.*

In the examples are mentioned the names *Cymbopogon martini* and *Andropogon martini.* Examples in the Code ought to be strictly in accordance with the Code. Although the original spelling of this epithet by Roxburgh was "*martini,*" in honor of General Martin, Article 73 specifies that the use of "i" instead of "ii" as prescribed is treated as an orthographic error and further that orthographic errors should be corrected. Therefore, I propose that these names be changed to *Cymbopogon martinii* and *Andropogon martinii* in this Article.

289. Proposal for minor emendation in *Article 42.*

Throughout the third paragraph of this Article the generic name *Phlyctidia* is abbreviated as "Ph." There would seem to be no reason to abbreviate "Ph." rather than "P." except to distinguish this genus from some other beginning with the letter "P," and in this instance the only other genus mentioned is *Phlyctis.* It is true that this "ph" is the transcription of the single Greek letter Ø but these generic names are treated as being Latin and the "P" and the "h" are two letters and not one. Therefore, I propose that the seven instances of "Ph." be changed to "P."

290. Proposal concerning *Recommendation 45C.*

Recommendation 54D (Stockholm Code) reads: "Authors should avoid adoption of a name or an epithet which has been previously published as a *nomen nudum.*" In the Paris Code this appears (as Rec. 45C) as follows: "Authors should avoid adoption of a name or an epithet which has been previously but not validly published for a different taxon." Now this says quite a different thing. The intent of the rewording was apparently to avoid using the expression *nomen nudum* (although this term is widely used and readily understood even though it is not defined in the Code), but as reworded the sense is widely enlarged, because "not validly published" includes much more than "*nomina nuda*", e.g. epithets lacking Latin diagnoses or lacking citation of types, which are not now validly published. Perhaps invalid epithets of this sort should be included within the scope of this recommendation, but the matter is clearly beyond the scope of mere editorial rewording. I propose that this enlarged concept be formally submitted to the next Congress for discussion and decision.

291. Proposal for minor alteration in *Article 50.*

This Article deals with the citation of authors for hybrids. The various Recommendations appended (50A-50H) do not deal with hybrids but refer to general matters regarding the citation of author's names. I propose that they be appended to Article 46, which is the appropriate Article dealing with these matters.

292. Proposal for minor emendation in *Recommendation 50G.*

As an example, *Combretum* Loefl. is cited. I propose that this be changed to "*Combretum* L. in Loefl.," as it appears in the list of nomina conservanda on page 258.

293. Proposal for minor change in *Article 51.*

This Article refers in line 4 to "Articles 57-58A," but there is no "Article 58A." I propose that the passage in question read "Articles 57, 58, Recommendation 58A."

294. Proposal for modification of the wording of an example under *Article 52.*

Article 52 states that when a genus is divided into two or more genera, the generic name must be retained for one of them. The example given is: The genus *Glycine* L. (Sp. Pl. 753. 1753) was divided by Adanson (Fam. 2: 324, 327, 562. 1763) into the two genera *Bradlea* and *Abrus*; this procedure is inadmissible: the name *Glycine* must be kept for one of the genera, and it is now retained for part of *Glycine* L. (1753)."

The example of *Glycine* is not ideal, for it is exceedingly complicated nomenclatural case. The original *Glycine* L. contained eight species belonging to almost as many genera by modern concepts. But in any case, the example, which was in the Code before the type method, should be modified to accord with this method.

I propose that the clause "and it is now retained for part of *Glycine* L. (1753)" be changed to read: "and it is now retained for that part of *Glycine* L. (1753) containing the type [lectotype] of that genus."

296. Proposal to change an example under *Article 55.*

Article 55 deals with the procedure to be followed in transferring a species from one genus to another. It reads: "When a species is transferred to another genus ... without change of rank, the specific epithet, if legitimate, must be retained, or (if it has not been retained) must be reinstated, unless one of the following obstacles exists: .... (2) that there is available an earlier legitimate specific epithet."

In the example given, *Statice karelinii* Stschegl (1851) is the species being transferred, the genus to which it is being transferred is *Acantholimon*; the combination *Acantholimon karelinii* (Stschegl) Bunge was made in 1872; the competing name is stated to be *Acantholimon szovitsii* Boiss & Buhse (1860). But this is not at all an example of the workings of obstacle 2 of the Rule (as it is stated to be), for the name *A. szovitsii* is not "an earlier legitimate specific epithet" but a later one. This example should be deleted and another inserted. It is not at all easy to find good uncomplicated examples of the workings of the Code, but the following may be suggested as an alternative:

Polypodium tetragonum Swartz (1788) is a validly published, legitimate species. In transferring this to the genus *Dryopteris,* Urban proposed the combination *D. tetragona* (Swartz) Urban (1903); but this is illegitimate, because it is a homonym of the earlier and different *Dryopteris tetragona* (Presl) Kuntze (1891). Therefore, Dr. Maxon took up the next oldest taxonomic synonym, *Polypodium subtetragonum* Link (1833) and made the new combination *Dryopteris subtetragona* (Link) Maxon (1926), the correct name under *Dryopteris.* Recent students have considered that this species belongs in the genus *Thelypteris,* and the combination *Thelypteris subtetragona* (Link) E. P. St. John (1936) was proposed. Article 55 makes it clear that when this species is being transferred to *Thelypteris,* the earliest legitimate specific epithet i.e. *tetragona* must be retained, and therefore Small was right in making the new combination *Thelypteris tetragona* (Swartz) Small (1938), which is the correct name at present under the genus *Thelypteris.* This article gives one reason why the same species can have two (or conceivably even more) correct epithets depending on what genus it is referred to.

297. Emendation of *Article 57.*

This Article deals with the choice of names when two or more taxa are united. One of the examples cited is: "When H. Hallier (Bot. Jahrb. 18: 123. 1893) united three species of *Ipomoea,* namely, *I. verticillata* L. (1759), *I. rumicifolia* Choisy (1834) and *I. perrottetii* Choisy (1845), he rightly retained the name *I. verticillata* L. for the resulting species because *verticillata* is the oldest of the three specific epithets." This statement is not in accord with the facts. Hallier's species is "*I. verticillata* Forsk. Ag. (1775). p. 44?, Vahl, Symb. 3 (1794). p. 33! *non* L." with the synonym *Conolvulus forskalei* Spreng. (publ. as "*Forskalei*"). That is,

Hallier's plant is definitely stated *not* to be *Ipomoea verticillata* L.[1] This example is therefore entirely incorrect, and I propose that it be deleted.

298. *Article 73.* Proposal to delete one of the examples.

This article specifies that typographic or orthographic errors should be corrected. But Note 4 remarks that "The liberty of correcting a name must be used with reserve, especially if the change affects the first syllable and, above all, the first letter of the name." One example given is that the generic name *Lespedeza* must not be altered, although it was an unintentional typographic error for *Cespedeza,* commemorating Vicente Manual de Céspedes. This is certainly in accordance with the note quoted.

However, among the other examples cited is a contradictory one, where it is recommended that *Gluta benghas* L. be corrected to *Gluta renghas,* since the vernacular name on which it was based was "*renghas*" and not "*benghas.*" This is another case involving the initial letter of a name and is not different from *Lespedeza* and *Cespedeza,* except that these are specific epithets rather than generic names. But this Article and Note 4 are intended to apply to all names, not just generic names. Therefore, it seems unwise to cite the correction of "*benghas*" to "*renghas*" as a good example to be followed, and I propose that this example be deleted from the Code.

299. Proposal to change the wording of the examples given under *Recommendation 75A (2).*

This recommendation concerns the gender of generic names formed from two or more Greek or Latin words, which take the gender of the last if the ending is not altered. The first three paragraphs of examples seem illogically organized. The wording proposed below does not alter the material but merely rearranges it in three paragraphs dealing respectively with masculine, feminine, and neuter compounds. Examples of names formed from Greek words:

Modern compounds ending in *-codon, -myces, -odon, -panax, -pogon, -stemon,* and other masculine words should be masculine. The fact that the generic name *Andropogon* L. was originally treated as neuter by Linnaeus is immaterial.

Similarly, all modern compounds ending in *-achne, -carpha, -cephala, -chlamys, -daphne, -mecon, -osma* (the modern transcription of the feminine Greek word *osme*) and other feminine words should be feminine. The fact that *Dendromecon* Bentham and *Hesperomecon* E. L. Greene were originally ascribed the neuter gender is immaterial. An exception may be made in the case of names ending in *-gaster,* which strictly speaking ought to be feminine, but which may be treated as masculine in accordance with botanical custom.

Similarly, all modern compounds ending in *-ceras, -dendron, -nema, -stigma, -stoma,* and other neuter words should be neuter. The fact that Robert Brown and Bunge respectively made *Aceras* and *Xanthoceras* feminine is immaterial. An exception may be names ending in *-anthos* (or *-anthus*) and *-chilos* (*-chilus* or *-cheilos*) which ought to be neuter, since that is the gender of the Greek words *anthos* and *cheilos,* but which have generally been treated as masculine; botanists are recommended to assign that gender to them.

300. Emendation to *Appendix I, Article H. 1.*

Among the examples of designations of formulas of hybrids is: "The designation *Potentilla tormentillo-formosa* published by Maund is considered as a formula *Potentilla formosa* × *Potentilla reptans.*" This is a misunderstanding, for the plant in question is *Potentilla formosa* × *Tormentilla reptans,* and of course *Tormentilla reptans* L. is a different species from *Potentilla reptans* L. When the genus *Tormentilla* is reduced to *Potentilla,* this species *T. reptans* has been referred to a number of other names, among them *Potentilla tormentilla, P. procumbens,* and *P. erecta.* I propose that this example be deleted from the Code, as it is not one to be followed as a model — the combination of a generic name with a specific epithet as "*tormentillo-formosa.*"

301. Proposal for a change of example in *Appendix I, Article H. 3.*

This Article deals with the names of bigeneric hybrids, and provides that the name consist of a "euphonious combination of part of the names of the two parent genera." One of the examples given is × *Asplenosorus,* i.e.

[1] As, of course, it is not, *I. verticillata* L. being an American species, currently considered not an *Ipomoea* at all but a species of *Jacquemontia,* and not by any means conspecific or related to the African species being discussed by Hallier, either nomenclaturally or taxonomically.

Asplenium × *Camptosorus*. Examples under the Code ought to be of correct names. I recently [1] pointed out that the name *Asplenosorus*, although rather widely used, has never been validly published. Article 40 provides that names in Latin form given to hybrids are subject to the same rules as those of nonhybrid taxa, and this includes the requirement for a description and also, after 1935, a Latin diagnosis. In the first publication of the name *Asplenosorus* by Wherry [2] there was no description at all. Later, Wherry did provide a description [3] but no Latin diagnosis has ever been published. I propose that the example × *Asplenosorus* be deleted and that × *Asplenophyllitis*, i.e. *Asplenium* × *Phyllitis* be substituted. The latter name was validly published with a Latin diagnosis by Alston. [4]

XXV. ADDENDUM TO NOMENCLATURE PROPOSALS BY BRITISH BOTANISTS

The drafting of the following was not complete when the series of proposals by British botanists published in Taxon 7: 257 (1958) were submitted. The introductory remarks to that series apply to this proposal also.

NOMINA SPECIFICA REJICIENDA

(J. E. Dandy and R. Ross)

The need for some provision in the Code whereby disadvantageous changes in the nomenclature of specially important species may be avoided has been increasingly felt in recent years. The kind of change referred to does not arise from any alteration in taxonomy but is due to the existence of an overlooked or little-used name which is an earlier synonym of an established name and must, by the Code, replace it. Various proposals, mostly incorporating such devices as *nomina specifica conservanda* and *nomina specifica rejicienda*, have been put forward at previous International Botanical Congresses and have failed to gain acceptance; but at Paris in 1954 the subject was so strongly debated, and a decision on it considered so urgent, that a Special Committee on Stabilization was set up, to report at Montreal in 1959. At the Paris Congress the British members of the Committee to Deal with Urgent Taxonomic Needs had proposed a new and elaborate Article (see *Taxon*, 1, 78-80; 1952) aimed at securing a large measure of stability in the nomenclature of important species by introducing *nomina specifica rejicienda* and at the same time embodying the present Articles 65-67 which already permit the rejection of specific names in certain conditions. This proposal was defeated, largely, perhaps, because of its too wide scope. Nevertheless we agree most strongly with its advocates that in the interests both of nomenclatural stability and of the continuance of friendly co-operation between taxonomists and other users of the scientific names of plants, it is highly desirable that some alteration in the existing Code should be made whereby changes in widely used specific names of plants of special economic and other importance, at present rendered necessary by the application of the Code, may be reduced to a minimum in the future; and that the establishment of a list of *nomina specifica rejicienda* would be the simplest and most satisfactory way of achieving this aim.

We accordingly put forward the following limited proposal:

302. *New Article 14bis.* "In order to avoid disadvantageous changes in the nomenclature of species entailed by the strict application of the rules this Code provides, in Appendix —, a list of specific names which are to be rejected (*nomina specifica rejicienda*). The object of this list is to further the attainment of stability in the names of species of special horticultural, economic or other importance: the names included in it, if not rejected in this way, would by the provisions of the Code replace widely accepted names well established in botanical literature or in commerce.

Examples: *Lilium lancifolium* Thunb. (Trans. Linn. Soc. 2: 333; 1794) would replace *L. tigrinum* Ker-Gawl. (Curt. Bot. Mag. 31: t. 1237; 1810), the well-established name of the widely cultivated tiger lily. *Lassonia heptapeta* Buc'hoz (Pl. Nouvellem. Découv. 21, t. 19 fig. 1; 1779) would prevent the retention of *Magnolia denudata* Desr. (apud Lam. in Encycl. Méth. Bot. 3: 675; 1791), the accepted name of an important cultivated species.

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[1] Amer. Fern Journ. 46: 152-155. 1956.

[2] Amer. Fern Journ. 27: 56. 1937.

[3] Wherry, E. T. Guide to Eastern Ferns 111. 1937.

[4] Proc. Linn. Soc. London 1939-40, pt. 2: 139. 1940.

Note 1. Names in the list are treated as illegitimate, but any which are earlier homonyms retain their status as such.

Note 2. If the specific epithet has been transferred to another genus it may be legitimate in its new position as from the date of transfer (see Art. 72, Note).

Note 3. A *nomen specificum rejiciendum*, when cited as a synonym, should be followed by the explanatory words ("*nomen rejiciendum*" or "*nom. rejic.*"

Note 4. The list of *nomina specifica rejicienda* will remain permanently open for additions. Any proposal of an additional name must be accompanied by a detailed statement of the cases both for and against its rejection. Such proposals must be submitted to the General Committee (see Division III), which will refer them for examination to the committees for the various taxonomic groups.

Supplementary proposals (in case the above is accepted):

303. *Article 15.* Renumber as Article 16 and reword as follows: When a proposal for conservation or rejection of a name has been provisionally approved by the General Committee, botanists are authorized to accept it pending the decision of a later International Botanical Congress.

304. *Article 63.* Add paragraph "If it is included in the List of *Nomina Specifica Rejicienda* (Appendix —)".

Mr. N. Y. Sandwith wishes it to be recorded that he considers that no special action for the stabilization of specific names is desirable.

XXVI. REPORT OF THE COMMITTEE FOR BRYOPHYTA

1. *Starting-point date.*

Several bryologists, mostly from N. America, have expressed disagreement with the present starting-point date of 31 Dec. 1801 (Hedwig, Species Muscorum) and desire a change.

To the notice in Taxon 6: 55. 1957, I got 9 answers, almost all from American bryologists all in favour of a change of date. They were not in agreement, however, about the date which should be accepted; 5 were in favour of 1 January 1801, 3 in favour of 19 April 1801, the actual date of publication, and one preferred that Linnaeus, Species Plantarum, 1753, should again be the start of moss nomenclature.

The members of the Special Committee for Bryophyta were asked by letter to vote on this point in the autumn of 1957. The results of the ballot were:

a. A large majority (8 for, 2 against) wanted to change the present starting-point date (31 Dec. 1801).

b. The result about what the date ought to be was:

for 1 Jan. 1801	5 votes
for 19 April 1801	5 votes

In these circumstances the Committee cannot submit a definite proposal to the next International Botanical Congress in Montréal. In view of the result of the first vote, and the opinions received from bryologists not members of the committee, it can be regarded as certain that there is a majority in favour of altering the date. The following alternative amendments to Article 13 are therefore submitted to the next Congress: Article 13 b to read as follows:

305. "b. Musci (the Sphagnaceae excepted), 1 Jan. 1801.
(Hedwig, Species Muscorum)."

or

306. "b. Musci (the Sphagnaceae excepted), 19 April 1801.
(Hedwig, Species Muscorum)."

Since the Stockholm Congress accepted a general proposal that starting-point dates should be either 1 Jan. or 31 Dec. of the year in which the work was issued, it would be more in accordance with that decision to accept 1 Jan. 1801.

2. *List of family names.*

The members who expressed an opinion on this point were unanimously in favour of such a list. However, it seems preferable to await the compilation of a definitive list, and meanwhile to use the list of Evans (Bot. Rev. 5: 49-96. 1939) for the Hepaticae and that of Fleischer for the Musci.

3. *Priority above the rank of family* was voted against by all members of the Committee.

4. The type specimen.

The type specimen in the Bryophytes must always be a permanently preserved specimen, and living material cannot be indicated as type. Only one member considers that a printed diagnosis with many figures of characteristic parts could replace preserved material as a type.

5. Conservation of names.

Androcryphia and Herberta are wrongly included in the list of nomina generica conservanda published in the International Code of Botanical Nomenclature, 1956. They should be deleted.

The results of the ballot on the additional names proposed for conservation were as follows:

	in favour	against
a. *Amblyodon* B.S.G.	9	—
b. *Holomitrium* Endl.	9	—
c. *Orthothecium* B.S.G.	8	1
d. *Pleuropus* Griff.	4	4
e. *Grimaldia* Raddi	2	6
f. *Saccogyna* Dum.	9	—

The Committee thus rejects the conservation of *Grimaldia* Raddi, and is undecided about *Pleuropus* Griff. The other proposals for conservation are accepted and are referred to the general Committee for submission to the next Congress for ratification.

R. van der Wijk

XXVII. REPORT OF THE COMMITTEE FOR ALGAE

I. Is your committee of the opinion that a list of commonly accepted family names, together with their type genera, could be established?

Five members thought it was possible and feasible to prepare such a list; one member thought it was possible but difficult; five members thought it was impossible or inadvisable.

II. Is your committee of the opinion that, for your group of plants, the rules of priority and of typification should not be applied to names of taxa above the rank of family?

Six members thought that such rules should not apply at this rank; two members thought that in principle they should apply, but that it was not practicable at present; three members thought that they should apply.

III. Is your committee of the opinion that it should be made a rule that the type of a name of a taxon of the rank of species or below must in the future be a permanently preserved specimen? If this proves technically impossible for some kinds of organisms, what measures should be taken to safeguard a consistent application of the type method?

One member thought that a permanently preserved specimen (or type preparation for microscopic organisms) should be required without alternatives; six members thought that a permanently preserved specimen should be designated as type if possible, but if impossible, illustrations and/or descriptions [five members] or only illustrations [one member] should be permitted to serve as types; two members thought that a permanently preserved specimen should serve jointy with illustrations, but if a specimen were impossible to preserve, an illustration (but never a description) should be permitted to serve alone as type; two members thought that permanently preserved specimens were impossible for many organisms, and one of these members suggested the acceptance of photomicrographs serving jointly with figures and descriptions as types in such instances.

P. C. Silva

XXVIII. VARIOUS PROPOSALS

307. In *Article 7, Note 5* is said: "The typification of organ genera, form genera, genera based on plant microfossils (pollen, spores etc.), genera of imperfect fungi, and any other analogous genera or lower taxa does not differ from that indicated above". (See also App. IV, 7). It is not evident from this that genera based on Sporae dispersae (pollen grains and spores etc.) are organ genera and form genera. They are made to appear to be a speciality. This has produced confusion. We must emphasize that genera of sporae dispersae are organ genera and form genera, because sporae dispersae are "detached organs" (see Art. PB 1 etc.).

Proposed by: R. Potonié (Krefeld).

308. *Article 24.* To make this article a bit tighter it is proposed that the words "and must be rejected" be added to the first sentence of paragraph 4.

For further comments on proposals .... and .... see discussion under *Datura cornucopaea, D. laevis* and *D. inoxia* in an article by F. R. Fosberg (Nomenclatural notes on Datura) to be published shortly in this Journal.

Proposed by: F. R. Fosberg (Washington D.C.).

309. *Article 26* (example): It is proposed to treat the spelling *siphilitica* of Linnaeus (in his *Lobelia siphilitica*) as an orthographic linguistic error and to use the correct spelling '*syphilitica*'.

Proposed by: N. Y. Sandwith (Kew).

310. *Article 48:* The second sentence to read: "When a name is conserved with a type different from that of the original author, it must not .....; instead the name of the author of the name as conserved, with the new type, must be cited".

Comment: A name cannot be used if its type is excluded. Under the type-method the conservation of a later circumscription excluding the type means the creation of a later homonym by conservation with a new type.

Proposed by: H. W. Rickett (New York).

311. *Article 68*(3). Add a note stating that the names of Necker's 'species naturales' in his Elementa Botanica 1790 are not to be regarded as unitary designations of species but that they are to be accepted as validly published generic names.

Proposed by: J. Proskauer (Berkeley).

312. *Article 73.* The alteration of the original wording of this article in the Stockholm and Paris codes, omitting the words "clearly unintentional" seems to have been a retrogressive step, introducing the possibility of extensive "corrections" based on opinion and also making several of the examples inconsistent with the wording of the article. For instance, it seems impossible to construe the spelling *Lespedeza* as other than an error, since the name commemorates de Cespedes, yet it is offered as an example of what we are not to correct. The only conceivable justification for retaining the spelling with *L* is that Linnaeus may have so spelled it deliberately, though this is not even likely. We are told that "orthographic errors should be corrected" but are then told that this one must not be corrected. It is admittedly not desirable to change the spelling of *Lespedeza.* Therefore the way to make the best of a bad situation and also to prevent wholesale corrections of what may be construed to be errors would seem to reinsert the words "clearly unintentional" and to make the first paragraph of Article 73 read "The original spelling of a name or epithet must be retained except that typographic or *clearly unintentional* orthographic errors and those indicated in notes 2 and 3 should be corrected."

Proposed by: F. R. Fosberg (Washington D.C.).

313. If organ genera or form genera based on detached organs are referred to genera or based on groups of organs connected together it should be a rule that the name of *that* group of organs which contains the organs on which the other name is based must be adopted, even if published later. That means, names of sporae dispersae may be replaced by those of sporangia, these by names of sporophylls, these by names of fertile shoots. But this would only be allowed, after it has been absolutely proved that the spore shape etc. in question only occurs in one genus.

Proposed by: R. Potonié (Krefeld).

XXIX. REPORT OF THE SPECIAL COMMITTEE ON STABILIZATION

J. S. L. Gilmour (Chairman)

1. The Special Committee on Stabilization was set up at the Nomenclature Section of the Eighth International Botanical Congress, Paris, 1954 (see *Taxon* 3: 220). At the meeting of the Section there was a "general feeling" that "something should be done" about the future stabilization of specific names, and the meeting "was nearly unanimous in its wish that some solution should be found". The Committee was appointed to find it.

2. The membership of the Committee is as follows:

Chairman — J. S. L. Gilmour, University Botanic Garden, Cambridge.

Vice-chairman — R. C. Rollins, Gray

Herbarium, Harvard University, Cambridge 38, Mass., U.S.A.

Members — Ch. Baehni, Conservatoire Botanique, 192 Route de Lausanne, Geneva, Switzerland.

J. E. Dandy, Department of Botany, British Museum (Natural History), Cromwell Road, London, S.W. 7.

F. R. Fosberg, Pacific Vegetation Project, c/o National Research Council, Washington 25, D.C., U.S.A.

D. D. Keck, National Science Foundation, Washington 25, D.C., U.S.A.

M. Lange, Botaniske Laboratorium, Gothersgade 140, Copenhagen, Denmark.

M. Le Gal, Laboratoire de Cryptogamie, 12 Rue de Buffon, Paris V, France.

R. Mansfeld *, Institut für Kulturpflanzenforschung, Gatersleben, Germany.

G. M. Schulze, Botanical Museum, Königin Luisestr. 6/8, Berlin-Dahlem, Germany.

J. A. Stevenson, Plant Industry Station, Beltsville, Maryland, U.S.A.

H. C. D. De Wit, Doorwerthsestraat 10, Heelsum, Netherlands.

3. A brief preliminary meeting of the Committee was held during the Congress at Paris. Since then, owing to the wide dispersal of the members, it has not been possible to hold a further meeting, and the work of the Committee has been carried out by correspondence. Four circular letters have been sent by the Chairman to members of the Committee, and the views of each member have been made known to the others. Owing to difficulties of communication, it has not been possible for the final text of this Report to be agreed by all members, but I hope that it gives a fair summary of the views of the Committee.

4. In the first place, it should be recorded that a large majority of the Committee supports the proposal that *some* modification of the Code designed to reduce the number of changes in specific names should be adopted at Montreal. Only two members express clear doubts on this: Fosberg and Lange both feel that it would be best simply to report lack of agreement by the Committee, though both express some support for particular proposals.

On the particular modifications to be adopted, however, the views of the Committee are not so clear cut. This, I think, is not surprising. The subject of the Committee's deliberations is such a controversial one among botanists that it would have been very extraordinary if its members, representing, as they do, a cross-section of botanical opinion, had reached agreement on it.

5. I will first give a brief, overall, picture of the support received for various proposals, followed by a more detailed report on them.

6. (a) Members of the Committee were asked to give their votes for proposals in order of preference, and there were six proposals for which a definite first preference was expressed by various members, namely: *Nomina specifica conservanda* (5 first preference, 2 favourable, and 5 against); *Provision of lists to accompany Arts. 65 and 66* (2 first preference, 2 favourable, 3 against, and 5 not committed); *Nomina specifica rejicienda* (1 first preference, 4 second preference, 2 favourable, 4 against, and 1 not committed); *Rejection of names not typified by holotypes* (1 first preference, 3 in favour, 4 against, and 4 not committed); *Deletion of Arts. 65 and 66* (1 first preference, 7 against, and 4 not committed); *Compilation of lists of names* (see para. 7 (x), 1 first preference, remainder have not had a chance to consider).

(b) It will be seen from the above that, if one takes into account only first preference votes, *Nomina specifica conservanda,* with 5, receives considerably greater support than any other proposal. If one takes into account first preference, second preference, and favourable votes, *conservanda* and *rejicienda* each receive 7, whereas none of the other four proposals receive more than 4.

(c) With regard to the proposals that received no first preference votes, none received more than five favourable votes, and each received either 2 or 3 votes against it.

7. The following is a summary of all the proposals that were supported by at least one member, a record of the support given to each by members of the Committee, and the main arguments for and against each proposal.

(i) *Nomina specifica conservanda.*

Proposal. (a) In Art. 14, first sentence, insert the word "species" before the word "genera". (b) After Note 1 to Art. 14, insert

* Co-opted.

the following new Note: "In the case of specific names, the Committee will consider for conservation only those names which have been used for a long period, are still widely current, and the changing of which would cause serious inconvenience among a large number of users; for example, the names of important economic plants, plants often used as text-book examples, and plants that have been the subject of important scientific work". (c) In the Example to Note 3 under Art. 14, add an example at the species level, illustrating that the specific epithet in a conserved specific name will not necessarily remain unchanged if the species is transferred to another genus.

Voting. *First preference:* Gilmour, Keck, Le Gal, Rollins, Stevenson; *In favour:* De Wit, Lange; *Against:* Baehni, Dandy, Fosberg, Mansfeld, Schulze.

The arguments for and against this proposal are set out under *Nomina specifica rejicienda.*

(ii) *Nomina specifica rejicienda.*

A revised proposal, based on the British proposal in Taxon 1: 78-80, has been put forward by Dandy and Ross in Taxon (8: 16).

Voting. *First preference:* Dandy; *Second preference:* Gilmour, Le Gal, Rollins, Stevenson; *In favour:* Mansfeld, Schulze; *Against:* Baehni, De Wit, Fosberg, Keck; *Not committed:* Lange.

The main motive of those putting forward a proposal for either *Nomina specifica conservanda* or *Nomina specifica rejicienda,* is, I think, that they feel, if *any* amendment to the Code is to be made, that it should be a simple and effective one, attaining its object of preventing future name changes by direct and straightforward means. The main objections that have been raised to both these proposals are (a) that there would be great difficulty in defining satisfactorily the type of names to be considered, (b) that there would be a flood of names sent to the Committee, (c) that there are now so few further names to be changed that it is not worth making an amendment to the Code to deal with them, and that the normal working of priority should be allowed to operate until all outstanding changes are made.

Supporters of the proposals answer these objections (a) by admitting that defining the scope of application is not easy, but pointing out that such definitions in *any* field of activity are difficulties that have to be faced, and maintaining that a definition (e.g. that in the *conservanda* proposal above) could be agreed which would enable the Committee to carry out their work with reasonable success, and (b and c) by pointing out that these two objections are self-contradictory and, further, that, in their view, if only a very few *really important* names would be saved, an amendment to the Code would be justified. In this connection, it is worth recalling that *Nomina generica conservanda* have been in existence for over 50 years, during which period very many specific name changes have taken place, so we are not justified in deducing the number of specific names that will be put forward from the number of generic names in the present lists.

As between *Nomina specifica conservanda* and *rejicienda,* the position may be summarized as follows: Briefly, there appear to be four main categories of cases involved in specific name changes not made for purely taxonomic reasons: (a) The existence of an earlier legitimate name for a species well known by a later, (legitimate) name, thus making the later well known name a synonym; (b) The discovery that a well known name is illegitimate, thus necessitating the use of the next available legitimate name; (c) The existence of an earlier homonym, whether legitimate or not, thus making the well known name a later homonym; (d) The discovery that the type of a particular name is not referable to the species for which the name is at present in use.

Supporters of *conservanda* point out that the adoption of this proposal would enable changes in *all four* categories to be avoided, whereas the adoption of *rejicienda* would cover only category (a), and they feel that, if *any* amendment to the Code is to be made, it should cover as many categories as possible. Supporters of *rejicienda,* on the other hand, object to a method which "permits the conservation of misapplications and other inaccuracies" (Dandy), and they maintain that rejection does not involve the difficulties and complications attendent on strict typification, as does conservation.

(iii) *Provision of lists attached to Arts. 65 and 66 (proposals 314 and 315).*

Proposal. Add the following sentence at the end of Art. 65 and Art. 66: "A List of names to be rejected for this reason will form Appendix ....".

Voting. *First preference:* Mansfeld, Schulze; *Favourable:* Baehni, Dandy; *Against:* Fosberg, Le Gal, Rollins; *Not committed:* the rest (5).

Mansfeld and Schulze feel that "many changes of names are caused by the fact that the application of these articles, especially of Art. 65, is practised in different ways", and that a provision for lists would help to standardize their application.

(iv) *Avoidance of strict typification (proposal 316).*

Proposal. In Appendix IV, para. 4 (d), delete closing words "unless another element agrees better with the original description and (or) figure".

This proposal was *put forward* by Mansfeld and Schulze too late for other members of the Committee to consider it in this form, but as a proposal "to avoid strict typification, if this would be in contradiction to the traditional use", it was *opposed* by Baehni, Dandy, Fosberg, Le Gal, and Rollins, the rest (5) of the Committee being *not committed.*

(v) *Non-recognition of nomina specifica nuda.*

This proposal was put forward by De Wit in Taxon 5: 6, where supporting arguments are given.

Voting. *In favour:* Baehni and Fosberg (both with qualifications), De Wit, Rollins; *Against:* Dandy, Mansfeld, Schulze; *Not committed:* the rest (5).

Baehni's support is qualified by the statement that "it should be made clear that a name without a description but with a reference to an earlier author is not a nomen nudum; see Ross in Taxon 5: 41".

Fosberg would support the proposal provided the wording of the suggested note to Art. 42 is altered to read ".... accompanied by descriptive information or (prior to Jan. 1, 1908) by an illustration with analysis showing essential characters...."

(vi) *Rejection of names not typified by holotypes (proposal 317).*

This proposal is put forward by Baehni as a new Article, Art. 10 bis: "Beginning on 1 January, 1961, a specific name accepted as correct can only be replaced by an older legitimate name if the latter is typified by a holotype in the form of an authentic herbarium specimen".

Voting. *First preference:* Baehni; *In favour:* Keck, Le Gal (qualified), Rollins (qualified); *Against:* Dandy, Fosberg, Mansfeld, Schulze; *Not committed:* the rest (4).

Baehni comments that, after putting forward this proposal, he found that it was, in essence, the same as that put forward by Rickett and Camp in Taxon 4: 37. He realises that it will not cover all cases, but feels that it should be given a trial. *Rollins* suggests that the article should make it clear that the existence of the specimen must be *proved* and not merely *assumed. Le Gal* suggests that the words "matériel de collection" should replace "authentic herbarium specimens", and that the following should be added at the end: "Sauf dans les cas de destruction accidentelle ou de modification ultérieure de ces holotypes".

(vii) *Proscription of certain works.*

This has not been embodied by any of the Committee as a formal proposal, but, in one form or another, it received *support* from Dandy, Fosberg, Lange, Mansfeld, and Schulze; Baehni, Keck, Le Gal, and Rollins are *against* it; the rest (3) *not committed.*

Fosberg supports "with reluctance" the idea of "placing certain very unfortunate works, mainly non-taxonomic, on a proscribed list". *Mansfeld* and *Schulze* suggest regarding "certain works which will become known for the first time not before the date of the edition of the Code as not existing for nomenclatural purposes".

(viii) *Deletion of Arts. 65 and 66.*

Fosberg's proposal to delete these articles (plus Art. 67) appeared in Taxon 7: 150, with supporting arguments; only a briefer version of these arguments had been seen by the Committee when they voted.

Voting: *First preference:* Fosberg; *Against:* Baehni, Dandy, Keck, Le Gal, Mansfeld, Rollins, Schulze; *Not committed:* the rest (4).

(ix) *Rejection of names not in the Index Kewensis.*

Keck draws attention to a suggestion by Gleason that "all specific names published prior to 1875 that had not been picked up by the Index Kewensis up to the first supplement following the Congress adopting the article" should be outlawed. The other members of the Committee have not had an opportunity to comment on this suggestion.

(x) *Compilation of lists of names.*

Lange has proposed the following, but there has not been time for the rest of the Committee to consider it:

(1) Compiling lists of names of all species considered to be of real significance with the correct names as now understood.
(2) Regarding this whole list as conserved against all future changes, whether the names are known to be in danger or not.
(3) Ask institutions which hold the various holotypes concerned — and other institutions or persons of sufficient standing to be designed — to prepare ample neotypes with all information on cytotaxonomical data, etc. etc. If possible to have neo-cotypes distributed widely as exsiccata.

8. It would, I think, be appropriate and helpful to conclude this section of the Report with an extract from a recent letter from Fosberg, one of the strongest opponents of *Nomina specifica conservanda* and *rejicienda,* together with a brief personal comment by myself as a representative of the other point of view.

Fosberg writes: "Why do we not as a committee recommend giving the present code, with a few changes to add clarity and remove ambiguity and sources of difference of opinion, a change to function? The name changes that result from its application will, in all likelihood, be only an infinitesimal fraction of what are certain to result from more accurate knowledge of the plants. If we could make such a recommendation as this, rather than the sort of thing that is now contemplated, I think we could settle, once and for all, this clamor and perhaps bring about wholehearted acceptance of the Code".

I have considerable sympathy with this point of view, but there is, I feel, another aspect of the problem which should also receive consideration. I agree that only comparatively few additional name changes for nomenclatural reasons will probably be made if no proposal is adopted at Montreal, but some of those few may concern plants whose names are of importance to more "name-users" than all the taxonomists in the world put together. These users include agriculturists, foresters, horticulturists, plant breeders, physiologists, teachers, and others who, together with taxonomists, form one single community on which the future progress of the plant sciences depends. From my contacts at Kew, Wisley and Cambridge with a wide range of name-users, I am convinced that a decision to adopt at Montreal a proposal (involving no compromise on any basic principle of sound, scientific taxonomy) which was clearly and unambiguously designed to reduce changes in specific names would constitute an important and statesmanlike contribution towards future co-operation between all those concerned with the study of plants.

9. The Committee was asked, in addition to their main task, to consider Art. 67 (Monstrosities) and Grumman's proposal in Taxon 3: 124. The following is the result:

(i) *Art. 67 (Monstrosities).*

In favour of maintaining the Article: Dandy (but needs further study), De Wit, Gilmour, Keck, Rollins, and Stevenson; *Add lists to Article:* Mansfeld and Schulze; *Delete Article:* Fosberg; *Not committed:* Baehni, Lange and Le Gal.

(ii) *Grumman's Proposal.*

Include in Code as a recommendation, not as a rule: De Wit; *Against inclusion:* Dandy, Fosberg, Gilmour, Mansfeld, Rollins, Schulze, and Stevenson; *Not committed:* Baehni, Keck, Lange and Le Gal.

NOMINA CONSERVANDA PROPOSITA

(49) Proposal for the conservation of the generic name 6914. **Dregea** E. Meyer (*Asclepiadaceae*) versus *Dregea* Ecklon et Zeyher (*Umbelliferae*).

Dregea E. Meyer, Comm. Pl. Afr. Austr. 199 (1837) (*nom. cons. prop.*). Holotypus: *D. floribunda* E. Meyer.

Adopted by: Decne. in DC. Prodr. 8: 618 (1844); Bentham in Bentham et Hooker f., Gen. Pl. 2: 775 (1876); Hooker f., Fl. Brit. Ind. 4: 46 (1883); K. Schum. in Engler et Prantl, Nat. Pflanzenf. 4(2): 293 (1895); Trimen, Handb. Fl. Ceylon 3: 160 (1895); Dalla Torre et Harms, Gen. Siphonog. 418

(1904); Costantin in Lecomte, Fl. Gén. Indo-Chine 4: 114 (1912); Ridley, Fl. Malay Penins. 2: 387 (1923); Bullock, Kew Bull. 1956: 512 (1957).

Dregea Ecklon et Zeyher, Enum. Pl. Afr. Austr. Extratrop. 350 (Apr. 1837) (*nom. rej. prop.*).

Adopted by: all authors since Ecklon and Zeyher have regarded this as a taxonomic synonym of *Peucedanum* Linné (1753).

Discussion. Although the month of publication of the second part of Meyer's work has not been established, there can be no doubt that it was later than April 1837, and that *Dregea* E. Meyer is therefore an illegitimate later homonym. This proposal may savour of a plea to sanction one of my own too numerous errors; certainly at the time (1957) I published my account of the African species of *Dregea* E. Meyer, I had overlooked the earlier homonym. On reflection, however, I think there is good reason to conserve the name *Dregea* E. Meyer, which has been applied to a genus of some 12-15 species distributed over the tropics of the Old World and which otherwise must be replaced by *Pterophora* Harvey, Gen. S. Afr. Pl. 223 (1838), a name which has never been adopted and under which no binomials have been published. Evidently aware of the illegitimacy of *Dregea* E. Meyer, Stapf (Bot. Mag. t. 8976. 1923) adopted the truly barbarous generic name *Wattakaka* Hassk. (Flora 40: 99. 1857), based upon *Hoya* sect. *Wattahaka* Decne. (in DC. Prodr. 8: 639. 1844), but this is a taxonomic synonym of *Dregea* E. Meyer and clearly is not available for the African plant since it also included *Pterygocarpus* Hochst. (Flora 26: 78. 1843).

Finally, it is fitting that a generic name honouring so great a botanical collector as Drège should be maintained in general use, and I therefore propose conservation.

Proposed by: A. A. Bullock (Kew).

(50) Proposal for the conservation of the generic name 5331. **Idesia** Maximowicz (1866) of the Flacourtiaceae against *Idesia* Scopoli (1777).

Idesia Maximowicz, Bull. Acad. Sci. St.-Pétersb. 10: 485 (1866) (*nom. cons. prop.*).

Adopted by: — Bentham et Hooker f., Gen. Pl. 1: 972 (1867); Hooker f. in Curtis, Bot. Mag. *t. 6794* (1885); Warburg in Nat. Pfl.-fam. III, 6a: 45 (1893); Shirasawa, Icon. Ess. For. Jap. 1: *t. 76* (1900); Diels in Bot. Jahrb. 29: 478 (1900); Dalla Torre et Harms, Gen. Siphonog. 330 (1903); Schneider, Ill. Handb. Laubh. 2: 360 (1909); Wilson in Sargent, Pl. Wilson. 1: 284 (1912); Matsumura, Ind. Pl. Jap. 2(2): 382 (1912); Bean, Tr. & Shr. 1: 641 (1914); Chun, Chin. Econom. Tr. 254 (1921); Bailey, Stand. Cycl. Hort. 2: 1637 (1925); Gilg in Nat. Pfl.-fam. ed. 2. 21: 444 (1925); Hu et Chun, Icon. Pl. Sinic. 1: *t. 38* (1927); Nakai, Fl. Sylv. Korea. 17: 54 (1928); Makino & Nemoto, Fl. Jap. ed. 2, 773 (1931); Kanehira, Formos. Tr. ed. 2. 477 (1936); Rehder, Man. Cult. Tr. & Shr. ed. 2. 653 (1940), Bibl. Cult. Tr. & Shr. 475 (1949); Makino, Ill. Fl. Jap. ed. rev. 307 (1949); Ohwi, Fl. Jap. 800 (1953); Hara, Enum. Spermat. Jap. 3: 227 (1954); Walker, Important Tr. Ryukyu Is. 227 (1954); etc.

Holotype species: *I. polycarpa* Maxim.

Discussion: Ohwi [in Mayebara, Fl. Austro-Higo. 86. 1931] proposed *Cathayeia* Ohwi, a substitute name for *Idesia* Maxim., on account of the earlier homonym of Scopoli, but he himself adopted *Idesia* Maxim. in his recent flora of Japan. *Idesia* Scopoli (Intr. 199. 1777) is a superfluous name for 7208. *Ropourea* Aubl. (1775) (Verbenaceae), and there is no binomial under it. *Idesia* Maxim., however, has been universally adopted for more than 90 years by almost all authors in standard monographic, floristic, and horticultural works. It is one of the common economic trees in China and Japan, and is also cultivated in Europe and N. America for ornamental purposes.

Although the genus is monotypic, its only species is a large useful tree familiar to the peoples of E. Asia; it constitutes the base for the subtribe Idesiinae. At least three geographical varieties can be recognized. No infraspecific combinations have been formed under *Cathayeia*. The name *Cathayeia* is also liable to be confused with the generic name *Cathaya* Chun et Keng (1958). Under the circumstances, it is appropriate to conserve *Idesia* Maxim., a universally accepted generic name, against *Idesia* Scopoli which has not been adopted by any later authors.

Proposed by: H. Hara (Tokyo).

(51) Proposal to conserve the generic name **Chlorococcum** Meneghini (Chlorococcaceae) against *Chlorococcum* E. M. Fries (Coccomyxaceae).

Chlorococcum Meneghini, Mem. R. Accad.

Sc. Torino, ser. 2. 5: 24. 1842 (*nom. cons. prop.*).

Lectotype species: *C. infusionum* (Schrank) Menegh. (*Lepra infusionum* Schrank).

Chlorococcum E. M. Fries, Syst. Orb. Veg. 356. 1825 (*nom. rej. prop.*).

Lectotype species: *C. botryoides* sensu E. M. Fries [*Botrydina vulgaris* Bréb.].

Proposed by: P. C. Silva and R. C. Starr, Svensk Bot. Tidsskr. 47: 235-247. 1953.

(52) Proposal to conserve the generic name **Haematococcus** Flotow (Haematococcaceae) against *Haematococcus* C. Agardh (undetermined family of algae) and *Disceraea* A. et C. Morren (Haematococcaceae).

Haematococcus Flotow, Nova Acta Leop. Carol. 20: 413 ff. 1844 (*nom. cons. prop.*).

Lectotype species: *H. pluvialis* Flotow.

Haematococcus C. Agardh, Icon. Alg. Eur. nos. 22-24. 1828 (*nom. rej. prop.*).

Lectotype species: *H. grevillei* C. Agardh.

Disceraea A. et C. Morren, Mém. Acad. Roy. Sc. Lett. Beaux-Arts Belg. ser. 2. 14[5]: 37. *t.* 3. 1841 (*nom. rej. prop.*).

Holotype species: *D. purpurea* A. et C. Morren.

Proposed by: M. R. Droop, Rev. Alg. ser. 2. 2: 182-192. 1956.

(53) *Nomen Conservandum Propositum:* **Venturia** Sacc. (as *Venturia* De Notaris & Cesati), Syll. Fung. 1: 586. 1882.

Typus: *V. inaequalis* (Cooke) Wint. *in* de Thüm.

Nomen Rejiciendum Propositum: Venturia De Notaris, Giorn. Bot. Ital. 1(1): 332. 1844; Atti Congr. Sci. Ital. Milano 6: 484. 1845.

Typus: *V. rosae* De Not.

Reasons for conservation: *Venturia* Sacc. is a large genus of economically important plant pathogens of world-wide distribution (112 spp. in Sacc. Syll.; over 50 spp. fide Engler & Prantl, Natürl. Pflanzenf.; "includes most species in the family [Venturiaceae]" fide von Arx (1952), etc.). It is the name used almost universally by plant pathologists, and the name is also used in the large and growing literature relating to the genetics of at least two species. I know of no important flora or monograph of the pyrenomycetes that uses any other name than *Venturia* for these species. If conservation is not effected, there may well be very undesirable consequences, as the name *Venturia* De Not. will compete with *Gibbera* Fr., a large and well-established genus. Failure to conserve would result in lasting confusion and chaos among mycologists, plant pathologists, and geneticists.

Reasons against conservation: The species of the genus of the apple scab organism and its allies have an available, even if unused, generic name (*Phaeosphaerella*). Retention of *Venturia* De Not. would follow the principle of priority. While it is true that the name would thus be used in a manner which has not seen acceptance in the last century, the few authors who have used *Endostigme* and *Spilosticta* appear to approve this course of action (as do Theissen & Sydow, 1917).

Further documentation: Mycologia 48: 591-595. 1956.

Proposed by: R. P. Korf (Ithaca, N.Y.).

(54) Proposal to conserve the generic name 4648a. **Rhacoma** L. against *Crossopetalum* P. Br. (both of Celastraceae).

4648a. *Rhacoma* L., Syst. Nat. ed. 10, 896, 1361. 1759 (*nom. cons. prop.*).

Type species: *R. crossopetalum* L., Syst. Nat. ed. 10, 896. 1759 "*crossopet.*"; Sp. Pl. ed. 2, 169. 1762.

Crossopetalum P. Br., Civ. Nat. Hist. Jamaica 145, pl. 17, fig. 1. 1756 (*nom. rej. prop.*).

Type species: *C. rhacoma* Crantz, Inst. Rei Herbar. 2: 321. 1766.

The genus generally known as *Rhacoma* L. contains about 20 species of shrubs and small trees in tropical America. Some authors include in it the related smaller genera *Myginda* Jacq. (Enum. Pl. Carib. 1. 1760) and *Cyminda* (Griseb.) Sarg. (Gard. and Forest 4: 4. 1891). Bentham & Hooker (Gen. Pl. 1: 366. 1862) and Index Kewensis placed *Rhacoma* L. as a synonym of *Myginda*, published a year afterwards.

Rhacoma L. has been adopted by most later authors, including: Lösener in Engler & Prantl 3(5): 217. 1892; Trelease in A. Gray, Synopt. Fl. No. Amer. 1(1): 399. 1897; Urban, Symb. Antill. 5: 69-79. 1904; Dalla Torre & Harms, Gen. Siphonog. 619. 1906; Britton, No. Amer. Trees 631-632, illus. 1908; Standley, Trees Shrubs Mex. 680-681. 1923; Britton

& Wilson, Sci. Surv. Porto Rico Virgin Is. 5: 517-518. 1924; Fawcett & Rendle, Fl. Jamaica 5: 28, illus. 1926; Barker & Dardeau, Fl. Haiti 200. 1930; Small, Man. Southeast. Fl. 819, illus. 1933; Lundell, Veget. Petén 212-213. 1937; Moscoso, Cat. Fl. Domingensis 334. 1943; Record & Hess, Timbers New World 123. 1943; Pittier et al., Cat. Fl. Venez. 2: 97. 1947; Standley & Steyermark, Fl. Guat. 6: 210-215. 1949; Alain, Fl. Cuba 3: 170-173, illus. 1953; etc.

Crossopetalum P. Br. has been adopted by: Kuntze, Rev. Gen. Pl. 1: 116-117. 1891; Hitchcock, Mo. Bot. Gard. Ann. Rept. 4: 70. 1893; Small, Fl. Southeast. U.S. 735-736, 1334. 1903; Rothmaler, Repert. Sp. Nov. Fedde 53: 10. 1944; Little, Check List Trees U.S. 169. 1953.

Crossopetalum P. Br. was originally published as a monotypic new genus with the species description accepted as a combined generic and specific description (Art. 41), though in a work without binomial nomenclature. *Rhacoma crossopetalum* L., published as the single species of a new genus, was based upon *Crossopetalum* P. Br., which was cited as a synonym and from which the specific epithet was taken. Thus, *Rhacoma* L. was a deliberate change of name and illegitimate (Arts. 11, 64(1)). Adanson (Fam. Pl. 2: 224. 1763) published the spelling *Crossopetalon.* The generic name *Crossopetalum* P. Br. was not accepted later until restored by Kuntze (Rev. Gen. Pl. 1: 116-117. 1891) to include both *Rhacoma* L. and *Myginda* Jacq. and with 13 transfers from *Myginda.*

Little (Madroño 7: 246. 1944) proposed *Rhacoma* L. for conservation in 1949 for the Stockholm Congress of 1950, but apparently no action was taken upon this name (International Code of Botanical Nomenclature 69-157. 1952). This proposal was not endorsed by the American Society of Plant Taxonomists (Brittonia 7: 46. 1949). Lack of approval apparently followed an unfavorable comment to the society's jury by its Committee on Nomenclature that *Rhacoma* L. was a deliberate renaming and that combinations in *Crossopetalum* P. Br. were available. However, the similar proposal to conserve *Bucida* L., a renaming of *Buceras* P. Br. in a smaller genus, was adopted (Madroño 7: 250. 1944; Brittonia 7: 47-48. 1949). Several other names published by Patrick Browne in the same work not using binomial nomenclature likewise have been made *nomina rejicienda* in favor of widely adopted later names by Linnaeus and other authors.

Both generic names have later homonyms not in use. *Rhacoma* Adans. (Fam. Pl. 2: 117. 1763) is a synonym of a section of *Centaurea* L. (Sp. Pl. 909. 1753; Gen. Pl. ed. 5, 389. 1754), family Compositae, and has not been used by recent authors. *Crossopetalum* Roth (Enum. Pl. Phaner. Germ. 1(1): 515. 1827) is now *Gentiana* L. sect. *Crossopetalum* DC.

Because of the widespread usage, stability will be achieved by retention of *Rhacoma* L. as a *nomen conservandum.* Otherwise, a few new combinations in *Crossopetalum* would be needed.

Proposed by: Elbert L. Little, Jr., United States Forest Service, Washington 25, D.C., U.S.A.

(55) Proposal to conserve the generic name 5215. **Hopea** Roxb., (Dipterocarpaceae) against *Hopea* Garden ex L. (Symplocaceae) and *Hopea* Vahl (Gentianaceae).

5215. *Hopea* Roxb., Pl. Coast Coromandel 3: 7, pl. 210. 1819 (*nom. cons. prop.*).

Type species: *H. odorata* Roxb., *l.c.*

Hopea Garden ex L., Mant. Pl. 14. 1767 (*nom. rej. prop.*).

Type species: *H. tinctoria* L., Mant. Pl. 105. 1767. (*Symplocos tinctoria* (L.) L'Hér.).

Hopea Vahl, Enum. Pl. 1: 3. 1805 (*nom. rej. prop.*).

Type species: *H. dichotoma* Vahl, *l.c.*
Neisandra Raf., Sylva Tellur. 163. 1838.

Type species: *N. indica* Raf., *l.c.* (*Hopea decandra* Buch.-Ham.).

Petalandra Hassk., Hort. Bogor. Descr. 104. 1858.

Type species: *P. micrantha* Hassk., *l.c.*

Hopea Roxb. is in general use for a genus of more than 55 species of trees in Indomalaya, distributed from India to Philippine Islands and East Indies. This genus contains several commercially important timbers. The name first appeared as a *nomen nudum, Hopea* Roxb. (Hort. Bengal. 42. 1814; *nom. nud.*).

Hopea Roxb. has been adopted by Index Kewensis and nearly all authors, including: Bentham & Hooker, Gen. Pl. 1: 193. 1862; Brandis & Gilg in Engler & Prantl, Natürl. Pflanzenfam. 3(6): 261-263. 1895; Brandis, Indian Trees 67-68. 1906; Lecomte, Fl. Gén.

Indo-Chine 1: 370-377, illus. 1910; Ridley, Fl. Malay Peninsula 1: 234-239. 1922; Merrill, Enum. Philipp. Fl. Pl. 3: 93-95. 1923; Gilg in Engler & Prantl, Natürl. Pflanzenfam. ed. 2, 21: 257-258. 1925; Reyes, Philipp. Woods 296-305, pl. 54-56. 1938; Pearson & Brown, Comm. Timbers India 92-103, illus. 1932; Howard, Timbers World ed. 3, 252-254. 1948; Heyne, Nutt. Pl. Indonesië ed. 3, 1110-1112. 1950; etc.

Until 1930, when the homonym rule was changed to reject a later homonym even if the earlier homonym was not in use, *Hopea* Roxb. was the legitimate name for this genus. As Rehder, Weatherby, Mansfeld, and Green (Kew Bull. Misc. Inform. 1935: 341-342. 1935) stated, the homonym rule was changed with the definite understanding that all well-known generic homonyms should, as far as possible, be made *nomina conservanda*. These taxonomists made a systematic search for later homonyms among the seed plants, but names beginning with the letters D to K were not checked at that time. Little (Madroño 7: 243. 1944) observed that *Hopea* Roxb. was a later homonym probably to be considered, but a list of homonyms with letters D to K apparently was not prepared.

The two earlier homonyms long ago passed into disuse. The single species of *Hopea* Garden ex L. was transferred as *Symplocos tinctoria* (L.) L'Hér. (Linn. Soc. [London] Trans. 1: 176. 1791). *Hopea* Vahl was a variant spelling of *Hoppea* Willd. (Neue Schrift. Ges. Naturf. Fr. Berlin 3: 434. 1801), the valid and accepted name of a small genus of Gentianaceae of East Indies.

If *Hopea* Roxb. is not conserved, the available name is *Neisandra* Raf., which was not accepted by other authors. Its type and only species is a nomenclatural synonym of *Hopea decandra* Buch.-Ham., which is also a synonym of *H. odorata* Roxb. Thus, adoption of *Neisandra* would require new combinations for all valid species. *Petalandra* Hassk. is another synonym.

Hancea Pierre (Fl. Forest. Cochinch. pl. 248. 1891) was a segregate genus, now a synonym of *Hopea* sect. *Dryobalanoides* Brandis. It is also a later homonym of *Hancea* Seem. (Bot. Voy. Herald 409, pl. 96. 1857), now a synonym of a section of *Mallotus* Lour. (Euphorbiaceae), and of *Hancea* Hemsl. (Linn. Soc. [London] Jour. 26: 309. 1890; Labiatae).

Proposed by: Elbert L. Little, Jr., United States Forest Service, Washington 25, D.C., U.S.A.

(56) Proposal to conserve the generic name 8364. **Laugeria** Vahl emend. Hook. f. against *Laugieria* Jacb. and *Laugeria* L. (all of Rubiaceae).

8364. *Laugeria* Vahl emend. Hook. f. in Benth. & Hook. f., Gen. Pl. 2: 101. 1873 (*nom. cons. prop.*).

Type species: *Laugeria resinosa* Vahl, Eclog. Amer. 1: 27, pl. 10 a-h. 1796.

Laugieria Jacq., Enum. Pl. Carib. 2. 1760 (*nom. rej. prop.*).

Type species: *Laugieria odorata* Jacq., Enum. Pl. Carib. 16. 1760.

Laugeria L., Syst. Nat. ed. 12, 2: 177. 1767 (*nom. rej. prop.*).

Type species: *Laugeria odorata* L., *l.c.*

Terebraria DC. ex Kuntze in Post & Kuntze, Lexic. Gen. Phaner. 552. 1903.

Type species: *T. resinosa* (Vahl) Sprague, Kew Bull. Misc. Inform. 1932: 350. 1932. (*Laugeria resinosa* Vahl).

The genus almost universally known as *Laugeria* Vahl contains 4 species of shrubs and trees in the West Indies, from Bahamas and Cuba to Lesser Antilles and Trinidad.

Laugeria Vahl as emended or described by J. D. Hooker was accepted in Index Kewensis and has been adopted by nearly all later authors, including: K. Schumann in Engler & Prantl, Natürl. Pflanzenfam. 4(4): 96-97. 1891); Hitchcock, Mo. Bot. Gard. Ann. Rept. 4: 93. 1893; Dalla Torre & Harms, Gen. Siphonog. 501. 1905; Urban, Symb. Antill. 4: 592. 1911; Wernham, Jour. Bot. 54: 332. 1916; Britton & Wilson, Sci. Surv. Porto Rico Virgin Is. 6: 238-239. 1925; Barker & Dardeau, Fl. Haiti 362. 1930; Standley, No. Amer. Fl. 32: 276-277. 1934; Moscoso, Cat. Fl. Domingensis 622. 1943; Record & Hess, Timbers New World 467. 1943.

Laugieria Jacq. and *Laugeria* L. both are synonyms of *Guettarda* L. (Sp. Pl. 991. 1753; Gen. Pl. ed. 5, 428. 1754) and have not been used for more than a century. Their type species is now known as *Guettarda odorata* (Jacq.) Lam.

Laugeria L. was merely a variant spelling and superfluous, rather than a new name, as the genus was dedicated apparently to Albert Laugier, Austrian botanist. Previously, Jacquin's original spelling Laugieria had been used by Linnaeus (Sp. Pl. ed. 2: 276. 1762).

Vahl did not propose a new genus *Laugeria* or even publish a generic description. He merely published descriptions of one old species (Symb. Bot. 3: 40. 1794) and two new species, *Laugeria resinosa* Vahl and *L. coriacea* Vahl (Eclog. Amer. 1: 26. 1796). The last is now known as *Antirhea coriacea* (Vahl) Urban (Symb. Ant. 1: 436. 1899).

J. D. Hooker remodelled the genus to contain *Laugeria resinosa* Vahl and a second species, crediting authorship of the generic name also to Vahl. However, a genus with *Laugeria resinosa* Vahl as type species should have been given a new name (Art. 52), because *Laugieria* Jacq. and *Laugeria* L. are synonyms of *Guettarda* L.

Hitchcock (Mo. Bot. Gard. Ann. Rept. 4: 93. 1893) while adopting *Laugeria* Vahl noted that the type of Jacquin's genus was then in *Guettarda*, that Vahl gave no generic description, and that Bentham and Hooker excluded *L. coriacea* Vahl from the genus.

Kuntze (in Post & Kuntze, Lexic. Gen. Phaner. 552. 1903) rejected *Laugeria* Vahl and revived for this genus the name *Terebraria* DC. (Prodr. 4: 458. 1830), which, however, had been published only as a synonym without species (Art. 33). No specific transfers were made.

T. A. Sprague (Laugeria "Vahl" = Terebraria Kuntze. Kew Bull. Misc. Inform. 1932: 349-350. 1932) reviewed the nomenclature and transferred two species to *Terebraria*. He observed that De Candolle merely cited *Terebraria* Sessé as a synonym and credited Kuntze as author.

Independently, Standley (No. Amer. Fl. 32: 276-277. 1934) in his monograph of Rubiaceae retained *Laugeria* Vahl, noting also that *Terebraria* Sessé had been published by De Candolle as a synonym and explaining further: "*Laugeria* Vahl, 1796, is antedated by *Laugeria* L., treated by all modern authors as a synonym of *Guettarda* (see page 228); technically, therefore, the name *Laugeria* as here used is not valid, but the writer hopes that it may ultimately be placed upon the list of *nomina conservanda*, as no other name has ever been applied to this genus since it was first published in 1796." Standley distinguished four species, of which only the type and a synonym have been transferred to *Terebraria*.

As *Laugeria* Vahl emend. Hook. f. has been adopted by all except Kuntze and Sprague, conservation of this name for the small genus will retain present usage and contribute toward stability. Otherwise, it would be necessary to adopt *Terebraria* DC. ex Kuntze (in Post & Kuntze, Lexic. Gen. Phaner. 552. 1903).

Proposed by: Elbert L. Little, Jr., United States Forest Service, Washington 25, D.C., U.S.A.

(57) Proposal to conserve the name **Gerardia** L. *sensu* Bentham 1835 against *Gerardia* L. 1753:

In a recent number of Taxon (7: 192. 1958) in the Report of the Committee for Spermatophyta on the conservation of generic names, the name *Stenandrium* Nees is recommended for conservation and the name *Gerardia* L., with type *G. tuberosa* L., is to be listed as a *nomen rejiciendum*, with the remark that "Since *Gerardia* has been much used in the scrophulariaceous sense, it has seemed best to recommend the conservation of *Stenandrium* against it to avoid confusion."

It is not necessary to go into the details of this matter, for it has been discussed at length by Thieret (Taxon 5: 58, 59. 1956) and by St. John (Taxon 6: 47-49. 1957). The committee wishes to maintain, quite properly as it seems to me, the names of both these important genera *Stenandrium* of the Acanthaceae and *Gerardia* of the Scrophulariaceae. But the procedure is backwards and the wrong name has been proposed for conservation. If *Stenandrium* is conserved and *Gerardia* is rejected, as the Committee has voted, then *Gerardia* is not available for the scrophulariaceous genus or for any genus as long as it is a *nomen rejiciendum*. On the other hand, if *Gerardia* is conserved for the scrophulariaceous genus, i.e. *sensu* Bentham, then *Stenandrium* Nees automatically becomes the correct name for the acanthaceous genus and is not in need of conservation. Therefore, I propose adding to the list of conserved names the following:

Nomen Conservandum Propositum; *Gerardia* L. *sensu* Bentham in W. J. Hooker, Companion Bot. Mag. 1: 204-211. 1835.

Type: *G. purpurea* L.

Nom. rej.: *Gerardia* L. Sp. Pl. 610. 1753; Gen. Pl. 266. 1754.

Type: *G. tuberosa* L.

Proposed by: C. V. Morton (Washington, D.C.).

(58) A proposal regarding the conserved name **Sphenomeris.**

Among the names of Pteridophyta listed as conserved in Appendix III is *Sphenomeris* Maxon, Journ. Washington Acad. Sci. 3: 144. 1913 (type: *S. clavata* (L.) Maxon), with the *nomen rejiciendum Stenoloma* Fée, Gen. Fil. 330. 1852 (type: *S. dumosum* Fée).

Rejected names may be of two kinds — either earlier homonyms or earlier synonyms (either nomenclatural or taxonomic). In this case, the rejected name *Stenoloma* is not a homonym, nor is it a taxonomic or nomenclatural synonym, if it is typified by *S. dumosum,* which is a species belonging to a different genus *Odontosoria.* It is impossible to list as a rejected name a genus that is different than the name being conserved. If *Stenoloma* is typified in the manner suggested, then *Sphenomeris* must be removed from the list of *nomina conservanda,* for it is already a valid name not in need of conservation.

However, the typification of *Stenoloma* is a debatable matter. It was discussed in some detail by Pichi-Sermolli (Webbia 9: 445-447. 1953). It is evident (and definitely stated in Appendix IV, on Determination of Types) that, when no species has been definitely indicated as the type, the species best agreeing with the original description should be chosen as lectotype. Pichi-Sermolli states in this case: "The original description does not allow us to select a type species." This is not quite true. The original description does give a very definite indication, for it describes the "Sporothecis marginalibus, depressis, ad apicem laciniarum angustarum sitis; indusio scarioso, tenui, dentato, superne hianti, subbivalvi, super 1-2-3 nervillis sedente; ..." This description agrees only with *S. clavata* among the species originally cited by Fée and not at all with *dumosa,* the lectotype suggested by Pichi-Sermolli. The indusium is not exactly "scarious," but it is thin, compared with that of *dumosa;* it is conspicuously toothed (not so in *dumosa*); it gives the impression of being "subbivalvate"; and it is commonly, although not always, borne at the apex of two venules (at the apex of a single venule only in *dumosa*). Therefore, *S. clavata* is the logical lectotype for the genus (as Christensen ultimately decided (Index Filicum, Suppl. III, 1934). If this is selected as lectotype, then *Sphenomeris is* in need of conservation and can remain on the list. All that is necessary is that the indicated type of *Stenoloma* be changed from *S. dumosa* to *S. clavata* (L.) Fée, and I propose that this be done.

Proposed by: C. V. Morton (Washington, D.C.).

(59) **Moghania** Jaume St. Hilaire, Journ. de Bot. Paris (2nd Year) 3: 61 (Feb. 1813) (*nom. cons. prop.*). (Type: *Hedysarum strobiliferum* L.) against *Lourea* Jaume St. Hilaire in Bull. Soc. Philom. Par. II. 3(5): 193 (1812).

The name *Moghania* Jaume St. Hil. has about 40 species in the tropical regions of the old world and one species is naturalized in the new world. Most of these species were earlier placed in *Flemingia* Roxb. ex Aiton Hort. Kew. ed. 11, 4: 349 (1812). Of these 16 were transferred to *Moghania* by Otto Kuntze (Rev. Gen. Pl. 1: 199, 1891) and 22 by Hui-lin Li (Amer. Jour. Bot. 31: 224-228, 1944).

The name *Moghania* has now been adopted in standard modern floras, e.g. H. Santapau: The Flora of Khandala (Rec. Bot. Surv. Ind. XVI, i: 84 (1953)). L. Hauman in Flore do Congo Belge et Ruara-Urundi 6: 257-259 (1954), and F. N. Hepper in Hutchinson and Dalziel's Flora of West Tropical Africa, 2nd ed. I (Pt. 2.): 559 (1958).

No combinations have been made under *Lourea* Jaume St. Hil. and the name is not in current use in this sense.

A change in the generic name from *Moghania* Jaume St. Hil. to *Lourea* Jaume St. Hil. so soon after the change from *Flemingia* Roxb. to *Moghania* Jaume St. Hil. would cause much confusion and it would also necessitate the giving of another name to "*Lourea* Neck." *sensu* Bentham & Hook. f. Gen. Pl. 1: 522 (1865) as used in the Indian Floras.

Proposed by: B. A. Abeywickrama (Ceylon).

(60) **Gelonium** Roxb. ex Willd. Sp. Pl. 4, 2: 831 (1805) (*nom. cons. prop.*). (Type: *Gelonium bifarium* Roxb. ex Willd.) against *Gelonium* Gaertn. Fruct. 2: 271, t. 139 (1791).

Gelonium Roxb. ex Willd. has over 30 species in the tropics of the old world. The generic name is now in use in this sense in all standard floras e.g. Pax & Hoffman in Pflanzenreich IV. 147. IV: 14-24 (1912), and Gagnepain in Fl. Indo-Chine 5: 429 (1926).

Gelonium Gaertn. is not in current use. About 7 species were once placed in this

genus but they have subsequently been transferred to *Ratonia* DC. and *Cupania* L.

Proposed by: B. A. Abeywickrama (Ceylon).

(61) **Enneastemon** Exell (1932) *versus Clathrospermum* Planchon ex Bentham (1862).

Whilst working out the *Annonaceae* for the revised edition of the Flora of West Tropical Africa, Keay (Kew Bull. 1953: 71. 1953) decided that *Enneastemon* Exell (Journ. Bot. 70, Suppl. 1: 209. 1932) is in fact a synonym of *Clathrospermum* Planchon ex Bentham (in Bentham et Hooker f., Gen. Pl. 1: 29. 1862). Although the name had been used in a number of reference works, Keay realized that this was largely due to the failure of authors accurately to identify the genus, which had been maintained from its original description and not from a knowledge of the species included in it. The genus *Enneastemon,* on the other hand, has become well known to workers on the flora of Tropical Africa and after consultation with Boutique, who had already used the name in his account of *Annonaceae* in the Congo Flora, with Exell at the British Museum, who had used it in his Conspectus of the Angolan flora, and with colleagues at Kew who were proposing to use it in the Flora Zambesiaca (now in press) a proposal for conservation was prepared and appeared in Taxon 2: 178 (1953).

The facts were set out quite impartially in Taxon 7: 188 (1958), but the really relevant points were perhaps lost in Keay's endeavour to be scrupulously fair. An aspect of the proposal which he did not mention is that before making it he had consulted many of his colleagues through A.E.T.F.A.T.*, an organization founded primarily to promote international cooperation in dealing with the taxonomy of African plants. One of its main objects is to ensure the maximum possible uniformity in taxonomic treatment and nomenclature in the many regional floras now in course of preparation or recently completed. In the present case, no fewer than four modern floras have already adopted the name *Enneastemon* Exell; two more are almost committed to the use of the name.

The original proposal overstressed the somewhat irrelevant fact that one reason for the proposed rejection of *Clathrospermum* was given as its incorrect original description and inadequate type. This is certainly not a good reason for rejection, although in effect it led to the description of *Enneastemon.* Other reasons are, however, cogent, satisfactory and in complete accord with the principles governing the idea of conservation. The most important of these is that *Clathrospermum* has not been used in original works for more than fifty years, whilst *Enneastemon* has been in general and increasing use since the description of the genus in 1932.

As Boutique has pointed out in a recent letter, the flower from which the description of *Clathrospermum* was drawn up no longer exists. There is no certainty that it did not belong to some other genus such as *Popowia* and in spite of what Keay decided there may be discordant elements in the genus *Clathrospermum.*

Finally, the possibility that Bentham drew up his description of the flower from Fitch's drawing must not be overlooked. Fitch was a botanical artist of outstanding ability, but his reconstruction of a fragmentary flower could be erroneous.

In these circumstances it seems reasonable to ask the Committee for Spermatophyta to reconsider its decision, before confirmation of its findings by the Montreal Congress makes such reconsideration impossible.

Proposed by: H. Wild (Salisbury, Rhodesia, and Kew).

(44) **Gaertnera** Lamarck (1792) (*nom. cons. prop.*).

Another proposal to conserve this name has been submitted by B. A. Abeywickrama (Ceylon). This proposal was received when the issue of Taxon (vol. 7 no. 8) was being printed in which this proposal was made by E. Petit, R. C. Bakhuizen van den Brink Jr., and C. G. G. J. van Steenis. The arguments put forward by Dr Abeywickrama cover completely those of the other authors and are therefore not repeated here.

(47) **Asterocalamites** Schimper (1862) (*nom. cons. prop.*).

Gegen den von W. Zimmermann eingebrachten Vorschlag, *Asterocalamites* W. P. Schimper 1862 (Terr. Trans. Vosges etc., p. 321) zu konservieren (siehe Taxon 7(8): 235, Oktober 1958), erhebe ich folgende Einwände:

* Association pour l'Étude Taxonomique de la Flore de l'Afrique Tropicale.

1) W. Zimmermann verstösst gegen den Code (z.B. Art. 6), indem er für sein nomen conservandum propositum die Rangstufe nicht klar angibt. In seiner Begründung spricht er von "Gattungsnamen". *Asterocalamites* Schimper 1862 l.c. ist aber als ein *Untergattungsname* veröffentlicht worden, und zwar deutlich *illegitim* (Art. 33 (1)). Schimper hat den Namen nicht erst 1869 aufgegeben, wie W. Zimmermann fälschlich meint, sondern — im Sinne des Art. 33 — gleichzeitig mit der Erstveröffentlichung (l.c., Pl. I: *Calamites radiatus*).

2) W. Zimmermann spricht in seinem Vorschlag im Zusammenhang mit dem in Frage stehenden Typus, nämlich: Steinkern mit nicht-alternierenden Rippen von "Calamitaceen-Steinkernen". Zu den *Calamitaceae* wird dieser Typus aber seit Potonié 1899 (Lehrbuch etc., p. 183) von sonst keinem Autor mehr gerechnet. Er wird vielmehr zu einer Familie gestellt, die von manchen Autoren *Protocalamariaceae,* von anderen *Asterocalamitaceae* genannt wird. W. Zimmermann verstösst somit abermals gegen Art. 6.

3) Der Gattungsname *Bornia* ist, woran W. Zimmermann Zweifel lässt, schon von Jongmans 1914 (Foss. Cat. 2(4): 172) eindeutig verworfen worden, was der Code zufolge Grundsatz VI mit Art. 63 (2), (3), Art. 65 und 66 legitimiert.

4) Der Name *Archaeocalamites* Stur 1875 (Culm-Flora etc., in: Abh. k.k. geol. Reichsanst. Wien 7(1): 2-19; Taf. I, fig. 3-8; Taf. III; IV; V, fig. 1, 2.) kommt für die gemeinte *Gattung* als einzig legitimer allein in Betracht. Selbst wenn *Asterocalamites* Schimper 1862 *nicht* illegitim wäre (siehe aber nochmals Art. 33 (1)!), so wäre doch *Archaeocalamites* Stur 1875 wegen der geänderten Rangstufe nach Art. 60 mit Priorität begabt und somit korrekt.

5) Morphologische Untersuchungen, in denen ich begriffen bin, haben ergeben, dass zwei generisch voneinander verschiedene Typen unterkarbonischer Equisetales-Steinkerne angenommen werden müssen, ein hier vorerst einmal "C. scrobiculatus-Typ" zu nennender und ein "C. radiatus-Typ", deren Differentialdiagnose ich an anderem Orte geben werde. Würde W. Zimmermanns Vorschlag (für welches Taxon aber?) angenommen werden, so bestünde die Gefahr einer Kollision mit *Asterocalamites* Zeiller 1880 (Végétaux Fossiles du Terrain Houiller de la France, p. 17 und Abb.), einer Form, die aller Wahrscheinlichkeit nach dem "C. scrobiculatus-Typ" und nicht wie *Asterocalamites* Schimper 1862 dem "C. radiatus-Typ" zuzurechnen ist.

Mein am 20. Mai 1958 von Herrn Dr. Stafleu zur Veröffentlichung angenommener Aufsatz "Archaeocalamites und Archaeocalamitaceae", von dem Herr Prof. Dr. W. Zimmermann Kenntnis hatte, und dem er zuvorkommen zu müssen glaubte, wird in Taxon 8(2): Februar-März 1959 erscheinen.

K. U. Leistikow, Department of Botany,
The University, Glasgow, W. 2.

NEWS AND NOTES

FLORA OF CZECHOSLOVAKIA

The Czechoslovak botanists have taken upon themselves the great task of systematically preparing the publication, in the form of books, of a work containing the descriptions, the biology, and the phytogeography of all species of plants growing in Czechoslovakia. The whole work is planned to consist of tens of volumes, at the compilation of which almost all Czechoslovak systematists will work. As introductory works the following have been published and prepared: the Czech translation of the nomenclatural rules (J. Dostál), the first volume of the series of *Cormophytae* will contain "Taxonomy" (the science of taxa, by J. Dostál), the phytogeographical regional division of Czechoslovakia (by J. Dostál), the phylogenetic systema of orders and families (by F. A. Novák), phytographical terminology (by J. Dostál), phytogeographical terminology (by V. Jirásek and J. Holub), and a list of authors' abbreviations and abbreviations of periodicals (by F. Mladý and V. Skalický).

Chief editor is F. A. Novák, editor of the algological series is B. Fott, of the mycological series A. Pilát, of the bryological series J. Šmarda and of the series of vascular plants F. A. Novák.

The first two volumes of the Flora (*Gasteromycetes* and *Phycomycetes*) are already being printed. The volumes *Pteridophyta* (ed. F. A. Novák) and *Gymnospermae* (ed. I. Klášterský) are in preparation.

The whole work will be published under the aegis of the Czechoslovak Academy of Sciences, and the single volumes will be reviewed in "Taxon".

Editor's address: Prof. F. A. Novák, Botanical Institute of the Charles' University, Benátská 2, Praha 2, ČSR.

(J. Dostál, Praha).

A PROPOSAL FOR THE ORGANIZATION OF BOTANICAL DOCUMENTATION

One of the most difficult problems of contemporary scientific methods is expert documentation of scientific literary sources. In systematic work this problem is especially grave, and, at this time of unsettled international scientific relations, these difficulties sometimes make systematic, and specially nomenclatural work, almost impossible. The periodicals published at present contain only reports concerning contemporary literature, and these are often very late and incomplete. In my opinion, there is only one way out of this situation, and that is mutual cooperation of scientific botanical institutions, which would participate in the organization of international botanical literary documentation.

The main purpose of this documentation would have to be completeness of citations, clearness, facility of use, and accessibility for all workers of all scientific laboratories all over the world. I think that it would be possible to realise this documentation as suggested below in a very short time, and in such a way that the various single scientific institutes would gain all documents without any considerable expense.

My proposal runs as follows:

1. Within the framework of the International Association for Plant Taxonomy a small committee should be elected which would be entitled to conduct the expert work and to appoint one delegate (correspondent) from each country to the broader working committee.
2. The committee should compile an index of all scientific botanical laboratories that would like to cooperate with the organization of international botanical literary documentation.
3. These institutions will be invited to supply lists of all periodicals (full bibliographical title and date of all volumes) with partially or wholly botanical contents that have ever been published in the region of their activity.
4. It will be the task of the committee to compile a complete index of all botanical periodicals (according to point 3) and issue it as one of the volumes of Regnum Vegetabile.
5. The institutions (sub 2) will inform the committee as to which of these periodicals they will be willing to abstract bibliographically.
6. The committee will collate this information so as to avoid duplication of work and will inform the respective institutions that have volunteered to provide abstracts of the results.
7. The committee will prepare instructions concerning the preparation of the abstracts, it will work out a classification of the branches of botany, according to which the abstracts will be grouped (systematically according to families and genera, phytogeographically according to natural wholes or political boundaries, morphologically according to organs, etc.). The titles of publications that may be quoted under more than one heading of the classification will be included in several documentary cards in the next edition.
8. Those institutions (sub 2) that volunteered to provide the abstracts will gradually carry out a complete abstraction of botanical literature and periodicals which they had undertaken to abstract, in accordance with the instructions issued by the committee. The carrying out of instructions and the keeping of the time limits will be a point of honour for the member institutions.
9. Further procedure remains to be decided upon by discussion.

There are these possibilities:

a. The number of member institutions that have undertaken to print each documentary card will be determined (if the cited work should be included under several headings, multiplied by that number) and a series of these cards will be sent by way of exchange at definite time-intervals to all member institutions, which will file these series according to the system of branches in their files of

documents. In this way all member institutions will, after a certain time, and it may be a very short time, have gained a complete register of literary documents, which it would be easy to keep up to date by constant international cooperation.

b. A way will be found to set up for these literary botanical documents a central publishing organ, which will issue the handwritten documents sent in by the member institutions (sub 2) in the form of printed index cards in sufficient numbers and distribute them preferentially in the usual commercial way among the member institutions.

10. After the conclusion of the abstracting of botanical literature from periodicals, the same method would be used for the issue of documentary cards for botanical works not issued periodically and for self-contained publications.

I am far from expecting that this rather concise proposal will be accepted without any discussion. I should, however, be very happy if it causes the next International Botanical Congress at least to consider, in some of its commissions, the international organization of botanical literature.

J. Dostál

NOTICES OF BOOKS

Contributions to this column will be gratefully received by Dr. K. U. Kramer, Botanical Museum, Lange Nieuwstraat 106, Utrecht, Netherlands.

British Vascular Plants

J. E. Dandy: List of British vascular plants. British Museum (Natural History), London, 1958. Price 10 s. (xvi + 176 pp.; an enumeration, with synonymy).

Mosses of Poland

B. Szafran: Flora Polska. Mchy (*Musci*) Vol. I. Państwowe wydawnictwo naukowe, Warsaw, 1957. (449 pp., 32 plates; with keys and descriptions; in Polish).

Flora of Armenia

Flora Armenii Vol. 3. *Platanaceae - Crassulaceae.* Ed. by A. L. Tachtadžian. Publ. by Akademiya Nauk Armenskoy SSR, Erivan, 1958. (385 pp., 108 ill., 3 photogr., 1 map).

Mesembryanthemum and Allied Genera

H. M. L. Bolus: Notes on *Mesembryanthemum* and allied genera. III. Publ. by the Univ. of Cape Town, 1958. (pp. i-iv, 289-417; with keys to *Meyerophytum, Schwantesia, Herrea, Dorotheanthus, Rabiea, Aloinopsis Nananthus,* and to the genera of *Mesembryanthemaceae;* contains numerous plates).

Index to Plant Chromosome Numbers

The second issue of the Index to Plant Chromosome Numbers, compiled from nearly 300 journals published in 1957, is now ready for distribution. There are around 2000 listings of original chromosome counts from the entire plant kingdom and a bibliography of 196 papers from which the listings were taken. Preparation of the Index has been supported in part by a grant from the National Science Foundation of the U.S.A. The price of each issue is $ 1. Orders for subscription may be sent to: Dr. C. Ritchie Bell, Department of Botany, University of North Carolina, Chapel Hill, N.C., U.S.A.

Dutch-English Botanical Vocabulary

C. A. Backer: Dutch-English taxonomic-botanical vocabulary. 2nd ed. (1956) by Bibliotheca Bogoriensis, Bogor/Indonesia. Price $ 3.00 (incl. postage). (A mimeographed dictionary, including also many words only remotely connected with taxonomy. A limited number of copies may be obtained from the Flora Malesiana Foundation, Rijksherbarium, Leiden, Netherlands).

* * *

Monographs, revisions, etc., published in periodicals

S. I. Ali: Revision of the genus *Indigofera* L. from W. Pakistan and N.W. Himalayas. Bot. Notiser 111 (3): 543-577 (1958). (With key, illustrations, and maps).

F. D'Amato: Revisione citosistematica del genere *Colchicum.* III: *C. alpinum* Lam. & DC., *C. cupanii* Guss., *C. bivonae* Guss. Chiave analitica per la determinazione delle species di *Colchicum* della flora Italiana. Caryologia 10: 111-151 (1957).

N. T. Burbidge: A monographic study of *Helichrysum* subgenus *Ozothamnus* (*Compositae*) and of two related genera formerly included therein. Austral. Jo. Bot. 6 (3): 229-284 (1958). (Publ. October 14th, 1958). (With key, descriptions, and illustrations).

A. Chaves Batista & R. Ciferri: Morphogenesis and systematic of the fungi of the new order *Chaetothyriales*. An. Soc. Biol. Pernambuco 15 (2): 283-295 (1957). (With key to the genera).

P. C. Chen & T. L. Wan: A preliminary study of the Chinese *Andreae*. Acta Phytotax. Sin. 7: 91-104 (1958). (With key).

R. C. Ching: The fern genus *Plagiogyria* on the mainland of Asia. Ibid. 7: 105-155 (1958).

——: A revision of the fern genus *Archangiopteris* Christ & Giesenhagen. Ibid.: 201-225 (1958).

N. Feinbrun & W. T. Stearn: A revision of *Sternbergia* (*Amaryllidaceae*) in Palestine. Bull. Rec. Counc. Isr. 6d: 167-173 (1958).

P. S. Green: A monographic revision of *Osmanthus* in Asia and America. Notes Roy. Bot. Gard. Edinburgh 22 (5): 439-542 (1958). (With key, descriptions, illustrations, and maps).

Ding Hou: A conspectus of the genus *Bhesa* (*Celastraceae*). Blumea Suppl. IV: 149-153 (1958). (An enumeration, with keys for flowering and fruiting material).

E. W. Jones: An annotated list of British Hepatics. Trans. Brit. Bryol. Soc. 3: 353-374 (1958).

J. Th. Koster: Notes on Malay *Compositae* IV. Blumea Suppl. IV: 170-177 (1958). (With key to sections and species of some sections of *Vernonia*).

B. Maguire, J. J. Wurdack & collab.: The Botany of the Guayana Highland — Part III. Mem. N.Y. Bot. Gard. 10 (1): 1-156 (1958). (With keys to the genera of *Xyridaceae, Orectanthe, Abolboda,* genera of *Rapateaceae, Saxofridericia, Amphiphyllum, Epiphyton, Schoenocephalium, Duckea, Spathanthus, Monotrema, Clusia* sect. *Clusiastrum* and *Cochlanthera, Calyptranthes* and *Marlierea, Terminalia* sect. *Pachyphyllum,* and *Pachyloma* in Guayana; with several illustrations).

F. G. Meyer: The genus *Valeriana* in East Tropical and South Africa. Jo. Linn. Soc. London 55 (Botany No. 363): 761-771 (1958). (With key, descriptions, illustrations, maps, and enumerations of specimens).

J. V. Pancho: Notes on cultivated species of *Ficus* in the Philippines. Baileya 6 (3): 129-134 (1958). (With key and illustrations).

B. R. Paterson: Revision of the genus *Melichrus* R.Br. (*Epacridaceae*). Proc. Linn. Soc. N.S. Wales 82 (3): 303-313 (1957). (With key, descriptions, illustrations, and maps).

R. S. Rao: A revision of the Indo-Malayan species of *Viscum* L. Jo. Indian Bot. Soc. 36 (2): 113-168 (1957). (With key, descriptions, illustrations, maps, and enumeration of specimens).

P. van Royen: Revision of the *Sapotaceae* of the Malaysian area in a wider sense. XVII. *Aulandra* H. J. Lam. Blumea Suppl. IV: 263-267 (1958). (With key and descriptions).

R. Singer & A. H. Smith: Mycological investigations on Teonanacatl, the Mexican Hunucinogenic mushroom. II. A taxonomic monograph of *Psilocybe* sect. *Caerulescentes*. Mycologia 50: 262-303 (1958).

H. Sleumer: The genus *Rhododendron* L. in Indochina and Siam. Blumea Suppl. IV: 39-59 (1958). (An enumeration, with key).

H. Smith: *Saxifraga* of the Himalaya. I. Section *Kabschia*. Bull. Brit. Mus. (Nat. Hist.) Botany 2 (4): 85-129 (1958). (With key, descriptions, and drawings).

J. Soukup: Los géneros de las Monocotiledoneas peruanas. Biota 2: 54-72 (1958).

H. Suzuki: Taxonomical studies on the *Subsecunda* group of the genus *Sphagnum* in Japan, with special reference to variation and geographical distribution. Jap. Jo. Bot. 16 (2): 227-268 (1958). (With key and illustrations).

P. Wendelbo: Arter og hybrider av *Centaurea* underslekt *Jacea* i Norge. (Species and hybrids of Centaurea subgenus Jacea in Norway.) Univ. Bergen Årbok 1957, Naturv. r. Nr. 5: 1-30. (With key, maps, and illustrations; in Norwegian).

H. C. P. de Wit: Revision of *Afrardisia* Mez (*Myrsinaceae*). Blumea Suppl. IV: 242-262 (1958). (With key, descriptions, and illustrations).

REQUEST

Prof. Dr. W. Robyns, Director of the State Botanical Garden, 236, rue Royale, Bruxelles (Belgium), would be grateful to receive viable seeds (± 25) of any named species of *Pachira* and *Bombax* for studies on germination.

The seeds loosing rapidly their germinative power, should be send directly after harvesting, by air mail, to Brussels, with the usual collector's label.

Arrangements for refunding any air mail costs can be made by contacting Professor W. Robyns at the above address.

Le Professeur Dr. W. Robyns, Directeur du Jardin Botanique de l'État, 236, rue Royale, Bruxelles (Belgique), serait reconnaissant pour tout envoi de graines viables (± 25) d'espèces déterminées de *Pachira* et de *Bombax* en vue d'études sur la germination.

Ces graines perdant rapidement leur pouvoir germinatif, sont à adresser directement après récolte et par avion à Bruxelles, accompagnées des indications usuelles de récolte.

Des arrangements pour remboursement éventuel des frais d'envoi peuvent être faits avec le Professeur W. Robyns à l'adresse indiquée.

I.A.P.T.—I.O.P.

The position of the members of the International Organization on Palaeobotany (I.O.P.) inside the International Association for Plant Taxonomy (I.A.P.T.) is as follows:

A wholly independent international organization of Palaeobotany is at present out of the question owing to the limited membership (ca. 90) and the resultant high cost of administration. For this reason the I.O.P. decided at its meeting at the Eighth International Botanical Congress (Paris, July 1954) to request I.A.P.T. to regard the I.O.P. as its palaeobotanical committee. Any palaeobotanist wanting to become a member of the I.O.P. can do so by joining the I.A.P.T. as a *regular* member indicating that he wants to be listed as a member of the I.A.P.T.-I.O.P. It is impossible to join the I.O.P. without joining the I.A.P.T.

The following Committee represents the I.O.P. in the International Association for Plant Taxonomy:

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SOME CASUAL NOTES ON THE NEW CODE OF NOMENCLATURE

C. V. Morton (Washington, D.C.)

The Paris edition (December, 1956) of the International Code of Botanical Nomenclature has been published such a short time that relatively few comments concerning it have been made. A few miscellaneous remarks may be appropriate at this time, in view of the impending Ninth International Botanical Congress in Montreal.

The first Chapter, which was previously entitled "Categories of Taxa, and the terms denoting them," now appears as "Ranks of Taxa, and the terms denoting them," a change that seems incorrect. The words "category" and "rank" are *not* synonymous, as may easily be seen from such a sentence as "Tribe is a category of higher rank than genus." This chapter deals with the categories as well as their relative rank. Nor is "taxon" an exact synonym of "category": otherside, there would have been no need to invent the term. This seeming prejudice against the word "category" in the new edition is especially deplorable in the treatment of the former Art. 8, which read: „Botanical nomenclature deals with: (1) the terms which denote the categories of taxonomic groups or units, and the relative ranks of these categories. . ." and which is now rendered (as a part of the Preamble) as ". . . the terms which denote the ranks of taxonomic groups or units . . ." There is a distinct loss of meaning here, for the single word "ranks" can not arbitrarily be made to mean both "categories" and "relative ranks of these categories." These changes represent emendations by the Editorial Committee and not decisions of the Paris Congress. The French translation unfortunately follows the English, but the German translation (excellently done by Dr. G. M. Schulze) correctly maintains the logical distinction between category ("Fachausdrücke") and rank ("Rangstufe").

Attention should be called to Art. 18, Note 1. This is new, and is an addition by the Editorial Committee not authorized by the Paris Congress. It reads: "When a name of a family has been published with an improper termination, the ending must be changed to accord with the rule, without change of the author's name." This may or may not be a desirable addition, but it should be discussed at the next Congress. It was obviously drawn up by analogy with the authorized note in Art. 19 regarding the names of subfamilies, but because a provision is good for one category does not necessarily mean that it is good for others. In this case, subfamilies are less important (especially to the general botanist) and usage has been less standardized; in the case of family names great care must be used to adopt provisions that will result in the retention of the largest number of familiar names. The note in question could conceivably result in a number of changes.

In my opinion, it is unfortunate that Rec. 33A (Stockholm Code), reading: "The

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specific epithet should preferably give some indication of the appearance, the characters, the origin, the history or the properties of the species. If taken from the name of a person, it usually recalls the one who discovered or described it, or was in some way connected with it," was deleted by the Paris Congress, the Rapporteur having stated that it was superfluous and that its last sentence was contrary to actual practice. This is obviously not true, as a casual check of specific epithets in the Index Kewensis in any genus will show; almost all that are named for persons are named for the collectors or occasionally for other persons connected in some way with making known the new species. Even in the seemingly extreme case of *Rooseveltia franklíniana*, Mr. Roosevelt was actually connected with and participated in the expedition during which the new genus was collected. In any case, this recommendation did have a purpose, that of indicating tasteful usage, and should not have been deleted. Now one is free to name species arbitrarily in honor of the President of one's university or for one's rich Aunt Susan without restraint. Since there is an understanding that items voted on at Paris or Stockholm will not be brought up again in Montreal, nothing can be done about this at present. But it is worth while keeping in mind the possibility of the restoration of this recommendation to the Code at some future time.

Another Recommendation that was deleted by the Special Committee on Orthography was 82 I (Stockholm Code), which treated of certain kinds of orthographic variants, with the justification that "being only a Recommendation it cannot provide a basis for changing existing names." But if that is a valid reason then all the Recommendations in the Code could be similarly deleted. The intention of this Recommendation was not to change or correct existing names but to provide a guide as to which may be considered orthographic variants and therefore homonyms, a much-needed guide that might well have been expanded rather than deleted, considering the general status of classical education, or the lack of it, in the United States at least.

The placing of the Appendices seems illogical. Appendix I (Names of Hybrids) and II (Fossil Plants) are placed immediately following the main text, where they should be, but III, IV, and V are placed at the back of the book, where they are widely separated and may, at least IV and V, be overlooked. This may have been done partly because III (the list of conserved generic names) is extensive and is the same in all languages. But it was not necessary, for all the appendices could have been placed directly after the English version, and then all that would be necessary would be a cross-reference at the appropriate place in the French, German, and Spanish translations to the location of Appendix III: it would not have been necessary to reprint it for each translation. Or again they could have been differently numbered, so that the present IV and V were III and IV, and then only the list of conserved names would be at the end. There was an effort made at Paris to delete Appendix IV (The determination of types), but the Congress voted to retain it. It is an integral part of the Code and should have a prominent place. The Code is based now fundamentally on the type method, and so the determination of what are or should be types is basically important. Unfortunately, it is one of the truly difficult parts of plant taxonomy, especially the determination of the types of genera that originally contained heterogeneous mixtures, such as the fern genera *Aspidium*, *Nephrodium*, or *Gymnogramma*. In the nature of things, there should not be any hard and fast Rules; each case must be judged on its own merits, which means a careful weighing of several or many factors; experience and judgement are really the only safe guides, but these come only with maturity and not always even then. Appendix IV gives a summary of the best practices and is invaluable for the student. The fact that its provisions are only guides rather than absolute Rules does not mean that it is not entirely appropriate for inclusion in the Code.

Less of a case can be made for the inclusion of the new Appendix V (Guide to the citation of botanical literature), which is not so important intrinsically, and which is also more debatable. Some of the provisions, such as the use of the abbreviation "Am." rather than "Amer." for American, and "Jour." instead of "Journ." for Journal are contrary to much good general usage. As a matter of fact, this "Guide to citations" is not followed consistently even by the editors of the Paris Code. For instance, it is recommended that bold face be used for volume numbers, but the Paris Code uses ordinary face in its citations. These decisions as to citations can be safely left to the editors of the various journals, for they will do as they like anyway.

The new provisions for the modification of the Code include the taking of a preliminary mail vote, as was done for the Paris Congress. The distribution of the proposals and a discussion of them in advance is certainly a good thing, but I am not sure if it is wise to attribute much weight to a mail vote. I am afraid that it is true that a large number of voters automatically followed the recommendations of the Rapporteur concerning the advisability of each proposal and did not think matters through for themselves thoroughly. This is perhaps inevitable, for having a valid opinion on some of these technical points requires a good deal of thought and study, as well as a background in actual use of the Code. Fortunately, the Rapporteur is a man of good judgement and his opinions are generally sound. Even so, he is not infallable, as is shown by his advocacy of several proposals that were firmly rejected and others that he withdrew from the voting at Paris even though they had been approved by the mail vote.

As an indication of the unreliability of the mail vote may be cited the two proposals regarding Rec. 17A (Stockholm Code); the first one was defeated 118 to 177 and the second accepted 233 to 66 and one might reasonably assume that they were utterly opposed, and yet they were identical - to delete the Recommendation! There were eight proposals regarding that ever-popular subject for debate, Rec. 82G (Stockholm Code) dealing with capital or lower case letters for specific epithets, ranging all the way from recommending all small letters to all capital letters, and including proposals to delete the Recommendation and to reaffirm it. All proposals — to modify it, to delete it, and to reaffirm it — were rejected in the mail vote. Under the circumstances, the Editorial Committee did the only possible thing and kept the wording in the Paris Code the same as previously. (This question was not voted on in the open meeting in Paris but was referred to the Editorial Committee, along with all the rest of the Article dealing with orthography.) This instance shows that it is not desirable to put forward proposals merely to reaffirm the current wording of an Article; the proposal can be defeated without any substitute being accepted.

In spite of its unreliability, the mail vote has been used to reject a large number of proposals. [1] At Paris this was possibly inevitable, because the amount of time available for discussion was strictly limited and the number of proposals very large. Yet this does have unfortunate consequences, for it tends to make only articles approved by the Rapporteur open for discussion. One instance may be cited, Doty's proposal regarding Art. 48 (Stockholm Code), where "validly published" is obviously necessary

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[1]) As I recall it, and I am pretty sure that I am right, at Paris Dr. Robyns proposed that all proposals receiving 200 negative votes or more be automatically rejected without discussion, and this was so voted, and the procedure actually followed this. It is erroneously stated in the reports published in Taxon (4: 126. 1955) and in the Rapports et Communications du Huitième Congrès International de Botanique, Paris, 1954, that the motion was that "all propositions that had obtained at least 200 votes in the preliminary vote to put to the vote without discussion," obviously quite a different thing.

in place of "effectively published." This change was disapproved by the Rapporteur, not because it was not right but because he advocated deleting this part of Art. 48. At the Paris Congress, it was pointed out to him that this Article does have a meaning and that it should not be deleted, and the Rapporteur withdrew his proposal to delete it, but that still left the necessary emendation rejected by the mail vote, and so the Article appears in the Paris Code (as Art. 39) with the incorrect "effectively." And since the correction was rejected by the Paris Congress it presumably can not be brought up again at Montreal.

Another more notable example at Paris was Dr. Rickett's proposed new Art. 74 bis: "A name must be rejected if it has no type," which has much to recommend it, for it lies within the framework of accepted usage and introduces no new principle and yet it provides a means of rejecting many old, doubtful and untypified names. Yet it was rejected in the mail vote, not on its own merits but on the recommendation of the Geneva Conference, which preferred another new article (concerning *nomina specifica rejicienda*) which was rejected at the Congress. An attempt to bring up then Dr. Rickett's alternative proposal was summarily dismissed by the presiding officer on the grounds that it had received more than 200 negative mail votes. In such a case, there ought to be a little leeway left to the presiding officer.

A rather strange thing seemed to have happened in regard to Dr. Wheeler's proposal on Art. 43 (Art. 33, Paris Code) which read (in part) as follows: "When, on or after 1 Jan. 1953, two or more different names (so-called alternative names) are proposed simultaneously for the taxon by the same author, none of them is validly published." Dr. Wheeler proposed to delete "on and from 1 Jan. 1953." This is a fundamental emendation, for it makes the Rule retroactive to 1753 when no other date is specified. The Rapporteur recommended the adoption of the proposal and it received 217 affirmative mail votes against 99 negative votes. Yet in Paris it was apparently rejected summarily without discussion by a show of cards; at least, no discussion is reported in the account published in Taxon (4: 155. 1955) and I recall none.

Very likely fewer proposals will be submitted to the coming Montreal Congress, and there may be time for discussion of all of them without having any automatically rejected. Of course, purely minor emendations to wordings or examples can be referred to the Editorial Committee without discussion.

It is to be hoped that only minor changes will be adopted at Montreal. We should give our present Code, still new and untried, a chance to prove itself. Possibly it is not within the power of any one Congress to limit the authority of a subsequent Congress, but it certainly can recommend to future Congresses that no more nomenclature sessions be held for a period of years, as the Geneva Conference recommended to the Paris Congress. The arguments that were adduced at Paris against a ten-year respite from rules changes seem to be without sufficient force to outweigh the positive advantages. The time has come when we should work with our Code and not on it.

WHAT IS GOSSYPIUM BARBADENSE LINNAEUS?

Yaroslav Prokhanov (Makhatchkala, U.S.S.R.)

> Il G. barbadense Linn. non è come abbiamo rilevato, una pianta descritta sopra la figura del Pluchenezio, ma bensi sulla pianta viva coltivata al Giardino di Upsal.
>
> Todaro, 1877-78.

The question about the true meaning of Gossypium barbadense L., contrary to the common belief, has been a highly controversial one. The species was first proposed by Linnaeus (1753) who transferred to it the epithet barbadense from an earlier cotton plant of Plukenet (1692, 1696), coming from Barbados. He considered the latter plant conspecific with his own. This dubious identification led to the unfounded conviction that G. barbadense L. grows on the island of Barbados as an indigenous plant.

Gradually there has spread and established itself the opinion that G. barbadense is represented by the Sea Island cotton, at present cultivated in the West Indies, with cotton fibre of the highest quality. Thus, the name Gossypium barbadense is now believed to represent the so-called South American, or Peruvian, group (sect. Synspermia Tod. emend. Prokh.) to which the Sea Island belongs.

One of the first authors to put forward this opinion was Parlatore (1866). Since then it has been accepted by many authors, although not by everyone. Now it is recognized almost universally, and hardly anyone doubts its validity. G. barbadense has thus become synonymous with the bulk of the cottons of the Peruvian group.

In view of the aforesaid, it is not very surprising that Watt (1907), despite all his efforts, could not find any trace of an indigenous cotton plant of the Sea Island type on Barbados. All the same, he thought Sea Island cotton a variety of a true, but unknown, Gossypium barbadense from the near-by South American mainland.

However this modern conception of Gossypium barbadense cannot well be traced back beyond Parlatore (1866). And while recent authors have been quite categoric in their understanding of G. barbadense, which has been as stated, all the earlier ones, strange as it may seem, were much embarrassed when trying to ascertain the real nature of G. barbadense L.

Thus, Edwards (1815) wrote: "Scarcely any diligence can at this day enable us to determine, so precisely and securely as it were to be desired, the species Linnaeus intended by barbadense. The specimen in his herbarium being doubtful; the figure cited for it, from Plukenet's work, deficient in character: and the specific phrase too vague for near distinction".

Some of the former authors fully realized that the actual Gossypium barbadense L. and Plukenet's plant adduced to it, as a synonym, are far from being the same. This has been most emphatically done by Todaro (1877—1878) in a statement chosen here as an epigraph. Unfortunately no one, even Todaro, drew the necessary deductions from the demarcation of the two plants, the one of Linnaeus, of uncertain origin, dubiously from Barbados, and the earlier one of Plukenet, actually from Barbados.

If this be done, there could be, despite the pessimistic conviction of Edwards (1815), more chances of elucidating G. barbadense L., for the crux of the problem lies not in the Barbados plant of Plukenet, but in the one of Linnaeus, bearing the legitimate epithet barbadense, although certainly not coming from Barbados,

Nevertheless Watt was convinced that the basis for G. barbadense L. is Plukenet's plant which Linnaeus cites as a synonym. Watt with much endeavour tried to prove the widespread preconceived understanding of G. barbadense L., by adducing as its

possible type a specimen in the Sloane herbarium of a cotton of the Peruvian group. He thought it the actual plant that Plukenet drew his figure from. The absence of any capsule in this specimen Watt simply explained by asserting that the capsule of Plukenet's figure is "imaginary".

Todaro not only pointed out the discrepancy between the Linnaean species and Plukenet's plant but also clearly stated that Plukenet was not at all the kind of author to draw an imaginary capsule: "Dall' altro canto Pluchenezio non era un botanico da inventare una figura, potea errare intorno ai sinonimi, che alla sua pianta si poteano riferire" (Todaro, 1877—78). So it is impossible to accept Watt's non-recognition of the capsule which is the most outstanding feature of Plukenet's figure.

In fact, the original G. barbadense L. has up to now remained obscure. It is most surprising that no one seriously tried to ascertain the real nature of the species.

Linnaeus in the first edition of his Species Plantarum (1753) recognizes three Gossypium species, namely G. herbaceum, G. barbadense and G. arboreum. Although each of these has synonyms attached to it, they were all based by Linnaeus on actual plants grown and observed by him. The species concerned, G. barbadense L., was grown in the garden at Upsala (Hortus upsaliensis) where its Linnaean type-specimen certainly comes from.

But while putting aside the synonyms as a decisive factor, it is nevertheless important to analyse them, in the hope of receiving some information about the author's conception of the taxon beforehand. Any synonym cited is more likely to lie near the limits of the taxon concerned than somewhere far aside. This makes it useful to elucidate the available synonyms.

The original G. barbadense L. had only one synonym cited, namely Plukenet's Gossipium frutescens, annuum, folio trilobato Barbadense. This unsuccessful identification, accompanied by the disagreeable transference of the epithet barbadense, unfortunately has led to much confusion and misunderstanding.

Firstly, let us find out whether there is anything with Plukenet to justify the recent deep-rooted belief that the plant described and figured by him is actually a South American indigenous cotton. No doubt, the only basis for this has been the ill-fated epithet Barbadense, indicating Barbados, one of the Smaller Antilles, near the coast of South America. Eventually it has become widely accepted that the quite recent cultivation of Sea Island cotton originated from some unknown truly indigenous sympodial (potentially annual) Gossypium species from the island of Barbados. No such species, despite continuous search, has ever been found.

If we look at Plukenet's figure, we cannot escape noticing that the capsule has reflexed bracteoles, with rather short teeth, unusual to the New World cottons, but characteristic of the common Old World species of Levant, G. herbaceum L.

This inference is corroborated by the two first Plukenet's synonyms out of the four. These are Gossipium frutescens, semine albo Caspar Bauhin, and Xylon s. Gossipium herbaceum Johann Bauhin, both cited, in contrast to the third one, without any taxonomic doubt. Both represent Gossypium herbaceum L.

But the complete identification of Plukenet's plant with G. herbaceum L. is contradicted by the trilobed subcordate leaves of the figure. These in no way agree with the leaves of G. herbaceum L., which usually are quinquelobed and profoundly cordate.

True, trilobed leaves are usual in some South American cottons, notably Sea Island, but this concerns only the upper leaves. Among New World cottons such leaves throughout are peculiar only to the early Uplands (Gossypium hirsutum L.), of the sect. Multibracteolata Tod. emend. Prokh., or the Central American group.

And besides, trilobed leaves are not alien to the Old World cottons, of the Sino-

Indian group (sect. Indica Tod. emend. Prokh.), especially to some arboreal forms (G. arboreum L. var. nanking (Watt) Prokh.). At the same time they are totally missing among the so-called African group (sect. Breviloba Tod. emend. Prokh.) represented by the Levant cotton, G. herbaceum L.

Nevertheless, the most likely source of the leaves of Plukenet's figure seems to me to be the leaves of some G. hirsutum L., from North America.

But where then has the idea come from that Plukenet had here in view a cotton of the Peruvian group? Overlooking the third synonym, although belonging to the latter, but here cited under a question-mark, there still remains the fourth synonym, Xylon Brasilianum Johann Bauhin. This one indisputably refers to the monopodial (obligatory arboreal) Kidney cotton of Brasil, i.e. the well-known cotton species of South America. However, this species is still well apart from our sympodial Sea Island, and the related Egyptian cottons, the varieties which are usually supposed to represent G. barbadense.

So we have come to the conclusion that Plukenet's Gossipium frutescens, annuum, folio trilobato Barbadense "consists of two or more entirely discordant elements". If such a description and such a plate were published in our days under a binomial, it would have to be rejected under Art. 66.

But among the mixtum compositum presented by Plukenet there unexpectedly prevails the Old World element, in the form of the indisputable G. herbaceum L. The South American element is represented by a tiny portion of the whole, in the form of a synonym, Xylon Brasilianum Johann Bauhin, added to it. But the latter still does not represent the supposed Sea Island stock, and so the accepted Parlatore's conception of Gossypium barbadense has to be abandoned.

But Plukenet's plant, as Todaro already insisted, has no direct connection with the type of G. barbadense L., represented solely by the Upsala plant of Linnaeus. We have paid so much attention to Plukenet because of the former misconception that it was the true G. barbadense L.

Linnaeus, the legitimate author of the species, never saw Plukenet's plant and cited it as a synonym only on surmise. He could not have it in mind when he proposed his G. barbadense, based on the actual plant at Upsala.

The only noticeable result of this regrettable identification was the transference by Linnaeus of one of Plukenet's epithets, barbadense, to the newly established species, named accordingly G. barbadense. It was a rash decision since Linnaeus was not aware of the true origin of his Upsala plant.

Plukenet's epithet may only be due to the fact that on Barbados at that time there were grown several Gossypium species, among these, as annuals, probably the Old World G. herbaceum L. and the American G. hirsutum L.

The transference has been a very unsuccessful one because it has led, as has been said, to many unfounded believes and to various misinterpretations. These have resulted in the recent impermissible use of the name G. barbadense. But reinstating at present the original Linnaean species, we, under Art. 62, shall have to retain its epithet barbadense, although the latter is ill-founded and absurd.

In his Species Plantarum, Linnaeus (1753) pointed to his preceding work Hortus Upsaliensis (1748) where he had given some additional data about his G. barbadense and its actual type beforehand, under the non-binary name, Gossypium foliis trilobis integerrimis.

In the Botanical Garden at Upsala, Linnaeus grew two species, firstly, the usual Levant cotton, G. herbaceum L., under the pre-binary name, Gossypium foliis quinquelobis, and secondly, the aforesaid G. barbadense L. It is noteworthy that Linnaeus distinguished the two, both known to him in florescence, almost solely by the number of leaf-lobes (5 or 3). This omission of flower differences is in itself a clear indication

that the two actual Linnaean species were taxonomically not so far apart, as has been usually believed, and that both represent at any rate Old World groups (African or Sino-Indian).

Linnaeus (1748), after adducing Plukenet's plant as synonym and automatically transferring its habitat to the species concerned, gives some indispensable data about the very specimen of the latter, at Upsala:

"Hospitatur in Caldario, biennis, altero anno fructificans.

Desc. Folia cordata, triloba, integerrima, hinc diversa, licet fruticosa videatur, a Gossypio caule erecto. Hort. cliff. 350".

Firstly, Linnaeus announced that the plant was grown in a green-house and that it flowered and produced fruit only in the second year. This is a very important statement which has been overlooked by all students of Gossypium.

All the cotton plants can be roughly divided into two main ecological groups, those flowering from the second year onward or even from a later one, and those flowering already during the first season. The former are the arboreal cottons, mainly with monopodial branching, all confined to the tropics, naturally incapable of reproducing themselves in latitudes with frosty winters. On the contrary, the latter, mainly with sympodial branching, although still perennial and potentially subarboreal, are comparatively short-lived and can be, thanks to their ability of flowering in the first season, successfully grown as annuals, in herbaceous form, in temperate regions.

From the remark of Linnaeus, there can be no doubt that the actual G. barbadense L., grown at Uppsala, was a cotton plant with an arboreal habit, whereas the other species at Uppsala, G. herbaceum L., possessed a herbaceous habit, capable of reproducing itself already in the first year.

Fortunately, from the adduced description — "The leaves cordate, trilobed, entire, thus distinguished, if it be fruticose, from Gossypio caule erecto, Hort. Cliff." — the exact plant Linnaeus meant under his G. barbadense can be, despite the former discouraging opinion of Edwards (1815), once and for all revealed.

The incidentally mentioned Gossypium caule erecto is Gossypium arboreum L. At Uppsala it was absent, but formerly Linnaeus had grown it in Clifford's garden (Hortus Cliffortianus), in Holland. Linnaeus quite definitely considers his G. barbadense L. the nearest relative of his G. arboreum L., the former probably just as fruticose as the latter, but in that case differing solely by its trilobate leaves, with entire lobes. Let us once more emphasize this important fact so as not to underrate it: Linnaeus, as he clearly states, actually saw G. barbadense L. in flower. If G. barbadense were the assumed South American cotton, belonging to a different cotton group, or to a different section of Gossypium, from the one to which G. arboreum L. belongs, such an acute observer as Linnaeus would have undoubtedly mentioned the many outstanding characters concerning flower size, flower colour, and so on.

Subsequently Linnaeus (1763) added to his G. barbadense one more character, the presence of three glands on the underside of the leaves. Although of minor importance, this anyhow fully coincides with our inference.

So we come to the inevitable conclusion that Gossypium barbadense L. is a very close relative of G. arboreum L., which differs from the latter only in its trilobed leaves, with broad entire lobes, instead of quinquelobed leaves, with narrow dentate lobes. Although striking, this difference from the genetical view is not so fundamental as has been thought at first, and is due only to a single allele O-o (Harland, 1932), the gene passing from dominant O (narrow leaves) to recessive o (broad leaves).

In view of this, it must be taken for granted, that G. barbadense L. and G. arboreum L., both pertain to the same species which, under Art. 57, must bear the name G. arboreum L. s.l. This has been already proposed by the present author (Prokhanov, 1947, p. 67).

G. barbadense L., although a legitimate name, based on a distinct type, must be included now, as a synonym, under G. arboreum L. In this combined species, G. barbadense L. is to be reduced to the rank of a variety at least. Under the Code, the proper name of this broad-leaved variety, representing the original G. barbadense L., is G. arboreum L. var. nadam (Watt) Prokh. It is significant that Watt just for this variety mentioned three-glandular leaves as normal, in accordance with the earlier indication of Linnaeus. The variety is an arboreal cotton plant grown in southern Asia (India).

Thus, in practice the name Gossypium barbadense L. has to be eliminated, and this brings relief. Otherwise, the reinstatement of the originally well-defined G. barbadense L. could not be easily denounced, and therefore would certainly cause, temporarily at least, no small amount of confusion. The resulting removal of the name concerned is to be welcomed.

But if all this is true, and it hardly can be otherwise, we must expect to find in the herbarium of Linnaeus, in London, the type specimens of both Gossypium species, once grown at Upsala, i.e. G. herbaceum L. and G. barbadense L. Fortunately, it was Watt who, having overlooked the importance of the genuine Upsala plants for the understanding of the Linnaean species, had in his big monograph (Watt, 1907, t. 24. f. A, and t. 19. f. A) represented specimens of cotton plants marked with the significant letters "H. U", the abbreviation of "Hortus Upsaliensis".

There can be little doubt that here we have the very Linnaean specimens from Upsala preserved for us. As could be anticipated, one of the specimens is Gossypium herbaceum L.; the other, in full agreement with our conclusion, is Gossypium arboreum L. var. nadam (Watt) Prokh.

Thus, it becomes evident that Linnaeus never saw a true New World cotton. The only American cotton described by him was G. hirsutum L., based solely on a former non-binary name of Philip Miller. No cotton of the South American group, strangely enough, was ever described by Linnaeus.

If so, then what is the proper name of the species comprising Sea Island cotton, the Egyptian cotton plants, and some of their South American relatives, and representing the bulk of the Peruvian group? Under the Code, the species concerned must bear the oldest legitimate name, Gossypium peruvianum Cav.

SUMMARY

(1) Gossypium barbadense, in the original sense of Linnaeus, is merely a broad-leaved variety of G. arboreum L. It must bear the name G. arboreum L. var. nadam (Watt) Prokh. Thus, the name G. barbadense L. becomes a synonym of G. arboreum L., and in practice has to be eliminated.

(2) The specific epithet barbadense is due here to its arbitrary transference by Linnaeus from a former collective species of Plukenet. No cotton of the South American group was ever described by Linnaeus.

(3) The species of Gossypium, up till now erroneously named G. barbadense and representing the South American group, must bear, as its proper name, Gossypium peruvianum Cav.

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THE NAMES IN NECKER'S ELEMENTA BOTANICA with special reference to *Dactylorchis* Vermeulen versus *Dactylorhiza* Necker

A. A. Bullock (Kew)

For many years there has been doubt concerning the unitary names in Necker's 'Elementa' (1790). A great many botanists have accepted as validly published generic names those of the taxon which Necker called *species naturalis*. Others have said that since he called them "species" the term is misplaced in relation to the actual rank of the taxon concerned and the names may be discarded under the provisions of Art. 5 of the Code. A third school of thought rigidly applies the word species in the sense of the Code (and of Linnaeus) and regards Necker's unitary names as illegitimate under provision 3 of Art. 68. A fourth, and perhaps more practical group has asked when the argument is to end. Mansfeld (1958) has provided one solution — definitely to accept Necker's names as validly published by a suitable addition to the Code — an addition, incidentally, which would be unnecessary if Proskauer's (1958) argument were shown to be sound. Another way was suggested by the late A. J. Wilmott (1935). Like Mansfeld, Wilmott was quite arbitrary and merely asked Congress (Amsterdam 1935) to proscribe (nomenclaturally) Necker's 'Elementa'. Congress did not agree, but asked for a further report on the subject which was never produced owing to Wilmott's premature death.

An analysis of Necker's unitary names is at present in preparation to demonstrate the large number of name changes which might be required by acceptance of Mansfeld's proposal, and at the same time it will be shown that few if any changes will be required if those names of Necker which have been in general use by later authors as generic names are accepted as from the earliest author who made binary combinations under them. It seems, therefore, that some means of rejecting, as invalidly published, all the names concerned is the best solution of this problem.

The argument as to the use of the term "species" by Necker and an attempt to equate it to the Linnean "species" is a double-edged one, as has been most admirably demonstrated by Proskauer (1958). The word species is not unique to biology and merely refers to the fundamental unit in the classification of any collection of objects, natural or otherwise. Necker's "species" was applied to biology by the addition of the word "naturalis" and in effect he stated that in his view the fundamental unit in biology (*species naturalis*) was not the Linnean species, but the Linnean genus. It will be recalled that this view is held by a fair number of modern biologists (Laurence *et*

al. 1953), though not as a rule by taxonomists. This disagreement about the meaning of words cannot be regarded as a sound basis for discarding Necker's names and indeed has resulted in Mansfeld's proposal to retain them. His proposal is strengthened by the fact that some few of the Necker names are conserved and quite a large number appear among the *nomina rejicienda.*

As an example of the kind of thing which will occur if Mansfeld's proposal is accepted at Montreal, the case of *Dactylorhiza* Necker *versus Dactylorchis* Vermeulen may be cited: —

Article 52 requires the retention of a generic name when a genus is divided into two or more genera. Necker followed this (then unwritten) rule when he divided *Orchis* Linn. into the three parts *Orchis* Linn., *Dactylorhiza* Necker and *Abrochis* Necker. Following his description of *Abrochis*, he gave a clear statement of the constituents of the three genera by reference to Murray's (14th) edition of Linnaeus, Syst. Veg. of 1784. That work included (pp. 807—811) no fewer than 50 species referred to *Orchis* Linn., the last six being listed as imperfectly known ("*Bulbis etiamnum ignotis*"). The first ten ("*Corollae galea calcarata*") Necker referred to his *Abrochis*, the next twenty-three ("*Bulbis indivisis*") to *Orchis* and the remaining eleven ("*Bulbis palmatis*" and "*Bulbis fasciculatis*") to *Dactylorhiza.*

The following table gives essential details of these eleven species, showing how they are distributed in modern classifications. There are no data on the topic but it seems a fair assumption that the first six were well known to Necker as living plants; most of the remainder probably only by (inadequate) description. Without attributing a type method to Necker it seems fairly clear that the type of his name *Dactylorhiza* must be chosen from the first six, and since *Gymnadenia* was described by Robert Brown in 1813, from the first four.

Descr. (Murray)	Name (Murray)	Modern classifications	Geographic origin
Bulbis palmatis	*Orchis latifolia* *O. incarnata* *O. sambucina* *O. maculata*	*Dactylorchis*	Europe
	O. odoratissima *O. conopsea*	*Gymnadenia*	Europe
	O. flava	*Habenaria* (sens. lat.)*	North America
Bulbis fasciculatis	*O. fuscescens*	*Habenaria* (sens. lat.)*	Temperate E. Asia
	O. strateumatica	*Zeuxine*	Tropical Asia
	O. hyperborea	*Platanthera*	North America, Iceland
	O. abortiva	*Limodorum*	Europe and Orient

The methods of typification sanctioned in the Code are not by any means exhaustive. It is often necessary to assume that when a genus is split into two or more, or some of its species are transferred to other genera, the type at least remains. In the present case, none of the species transferred elsewhere has any special claim to be the type of *Dactylorhiza.* A lectotype must be sought among the four that remain.

The holotype of *Dactylorchis* Vermeulen (1947) is *Orchis incarnata;* there is no reason for avoiding this species as the lectotype of *Dactylorhiza* Necker (1790). *Dactylorchis* is in such circumstances a nomenclatural synonym of *Dactylorhiza,* and a superfluous illegitimate name.

* *Perularia* Schlechter, accepted by some authors.

Only one recent author (Nevski, 1937, in Acta Inst. Bot. Acad. Sc. U.R.S.S., Ser. 1, fasc. 4) appears to have adopted the name *Dactylorhiza* and only two binary combinations under it have been published. *Dactylorchis* has been adopted by Vermeulen (1947), by Heslop Harrison (various recent publications) and in the recently published list of British plants (Dandy, 1958); between thirty and forty binary combinations have appeared. Unless *Dactylorhiza* is proscribed, the only way to maintain these names, and to avoid a similar number of new ones under *Dactylorhiza*, is to place *Dactylorchis* on the list of *nomina conservanda*.

In this particular case, it is relatively simple to establish the circumscription, in terms of included species, of a 'generic' name by Necker. In many cases, however, this is extremely difficult or impossible; it may have been for this reason that Necker's work was often ignored by his contemporaries and by later botanists. It would certainly make generic nomenclature easier if the proposal of the late Mr. A. J. Wilmott were adopted in whole or in part, and Necker's 'Elementa Botanica' thrown into a nomenclatural waste paper basket, as suggested at the end of the first paragraph of this paper. But if Mansfeld's proposal is accepted, or Proskauer's view endorsed, it is to be hoped that all those in favour will carry out some of the work of typification and identification involved.

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ARCHAEOCALAMITES UND ARCHAEOCALAMITACEAE

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Asterocalamites Schimper und Asterocalamites Zeiller sind illegitim. Legitim ist Archaeocalamites Stur.

In Fossilium Catalogus II: Plantae, Pars 3: Equisetales II, 1914 führt Jongmans auf p. 55 und 56 die Gattung Archaeocalamites Stur mit ihrer Synonymik an. Er gibt auf p. 56, Absatz 2 eine richtige Beurteilung der Sachlage, entscheidet sich aber in Absatz 3 — wenn auch konjunktivisch — aus Rücksicht auf den Gebrauch der Autoren zu einer Stellungnahme gegen sein unmittelbar vorher bekundetes besseres Wissen. Er schreibt:

"Meiner Meinung nach ist mehr für Stur's Auffassung zu sagen, und würde auch ich als die erste richtige Abbildung der richtigen Pflanze *Calamites radiatus* Bgt. betrachten und Schlotheim's Abbildung als eine zweifelhafte Abbildung einer Pflanze fraglichen Alters.

Da jedoch die meisten späteren Autoren den Namen *Asterocalamites scrobiculatus* in ihren Arbeiten verwenden, wäre es vielleicht nicht zweckmässig, den gut eingebürgerten Namen jetzt noch umzuändern."

Hierzu verweise ich vorerst auf Art. 62 des Pariser Code [1]) und stelle ausserdem fest, dass vor der Veröffentlichung des relevanten Teils des Foss. Cat. der inkorrekte Gattungsname Asterocalamites von Bower, Fritel, Gothan, Jongmans, Kidston, Matthew, Nathorst, Potonié, Renier, Vaffier, Zalessky und Zeiller, der korrekte Gattungsname Archaeocalamites aber von Jongmans et Kukuk, Leyh, Lotsy, Saporta et Marion, Schimper et Schenk in Zittel, Scott, Solms-Laubach, Sterzel, Stur, Tondera, Toula und Weiss verwendet worden ist. Dazu gebrauchte ihn noch Seward, jedoch versehentlich. Nichtsdestoweniger scheint bei einem etwa paritätischen Verhältnis der Ausdruck "die meisten ... Autoren"

[1]) Pariser Code steht für International Code of Botanical Nomenclature, 1956. Alle im folgenden erwähnten Grundsätze, Artikel, Empfehlungen etc. entstammen ihm.

ungerechtfertigt und gar keinesfalls — um es nur gleich zu bemerken — kann von jenem *allgemeinen Gebrauch* des Namens Asterocalamites während der fünfzig Jahre nach seiner Erstveröffentlichung (1862-1912) die Rede sein, den der Art. 14 für ein *nomen conservandum* vorzugsweise fordert. Ich gehe nun nach Grundsatz III, IV und VI vor.

Schimper veröffentlichte den Namen Asterocalamites in: Le Terrain de Transition des Vosges, Partie Paléontologique, 1862, p. 321 für ein von ihm an dieser Stelle gebildetes *Subgenus*, das sich auf *Calamites radiatus* Brongniart als Typus stützt. Da Schimper den neuen Namen selber nicht aufgenommen hat [2]) (loc. cit., Text und Pl. I: Calamites radiatus Bgt.; Traité de Paléontologie Végétale etc., Tom. I, 1869, p. 335 und Atlas, 1874, p. 10: Bornia radiata (Brongt.) Sch.; Schimper et Schenk in Zittel, Handbuch der Palaeontologie, II. Abt., 1890, p. 175: Archaeocalamites radiatus Stur), so ist die Veröffentlichung *nicht gültig* nach Art. 33 (1), und der Name Asterocalamites Schimper hiermit nach Art. 12 ausgeschlossen.

N.B.: Die Gattung Bornia Sternberg (Versuch einer geognostisch-botanischen Darstellung der Flora der Vorwelt, Hft. 4, Tentamen etc., 1825, p. XXVIII) wird in Einklang mit Jongmans (Foss. Cat. II, 4, 1914, p. 172) nach Art. 63 (2) ursächlich (3) und folglich nach Art. 65 und 66 verworfen.

Stur gliederte den Typus von Calamites radiatus Brongniart aus der Gattung Calamites aus und verleibte ihn der eigens gebildeten Gattung Archaeocalamites taxonomisch gleichrangig (ganz gemäss Art. 55) als Archaeocalamites radiatus ein (Die Culm-Flora des mährisch-schlesischen Dachschiefers, in: Abh. k.k. geol. Reichsanst. Wien, Bd. VIII, Hft. 1, 1875, p. 2-19, Taf. I, Fig. 3-8; Taf. III; Taf. IV; Taf. V, Fig. 1, 2). Diese Veröffentlichung ist die bei weitem sorgfältigste und gediegenste der fraglichen Materie, absolut einwandfrei im Sinne des Pariser Code, daher legitim und besitzt alle Rechte der Priorität (Art. 11, Abs. 2; Art. 45, Abs. 2). Gegen Jongmans' Vorwurf, Stur hätte den Namen Asterocalamites beibehalten können, spricht eindeutig Art. 63 (1), und bei vorhandener Legitimität des älteren Namens wären selbstverständlich Art. 51 (3) und Art. 60 zur Verwahrung heranzuziehen gewesen.

Demnach erlischt Asterocalamites Zeiller ohne weitere Zutat. Indessen erscheint die Gelegenheit willkommen, den Code an diesem Gegenstand durch und durch anzuwenden, um irgendeine Unklarheit möglichst endgültig zu beseitigen.

Fasst man Zeillers Verfahren (Végétaux Fossiles du Terrain Houiller de la France, 1880, p. 17) dahingehend auf, dass er die Untergattung Schimper zur Gattung erhob, so muss doch Art. 49 ausser Betracht bleiben, weil es sich hier ja nicht um einen legitimen Namen handelt. Die Autorschaft an der *Gattung* Asterocalamites (und damit ist der Verlust der Priorität zu Gunsten von Stur verbunden) betrifft also Zeiller allein, und dies umso mehr, als er seine Gattung (notwendigerweise, nämlich um sich vor Stur zu setzen) nicht auf den Typus von Calamites radiatus Brongniart, sondern auf den älteren von Calamites scrobiculatus Schlotheim gründete, den er als einerlei mit dem von C. radiatus ansah. Folgte man der Auffassung von der Gleichheit beider Typen, gegen die sich Jongmans (Foss. Cat. II, 3, 1914, p. 55, 56) auf Sturs gründlicher Darlegung fussend unmissverständlich ausgesprochen hat, dann wären die Namen Calamites scrobiculatus Schlotheim und Asterocalamites scrobiculatus (Schloth.) Zeiller *illegitime Synonyme* für Archaeocalamites radiatus (Bgt.) Stur, illegitim, weil zu den genannten Regeln noch der Art. 13 j), Anm. 1 hinzukommt, der ausdrücklich betont, dass Schlotheims Petrefactenkunde, und das bedeutet die Erstveröffentlichung von Calamites scrobiculatus, vor dem Ausgangspunkt liegt, wodurch auch das spezifische Epitheton zu Zeillers Asterocalamites noch für sich selber seine Gültigkeit verliert.

N.B.: Der Druck "Merkwürdige Versteinerungen aus der Petrefactensammlung des verstorbenen wirklichen Geh. Raths Freiherrn v. Schlotheim, mit 66 Kupfertafeln, Gotha, Beckersche Buchhandlung, 1832" kann, insofern Text und Abbildungen neben anderen Werken Schlotheims aus solchen, die vor dem Ausgangspunkt erschienen waren, hier lediglich *kopiert* worden sind, zur Ertrotzung der Legitimität für Calamites scrobiculatus rechtens nicht dienen, doch könnte vielleicht ein auf diesen und verwandte Fälle bezüglicher Passus in den Art. 13 eingefügt werden, der hervorhebt, dass derartigen *Kopien* hinsichtlich von Daten kein Erstveröffentlichungsrecht zukommt.

Die Möglichkeit illegitimer Synonymität der Beachtung empfehlend trete ich nun in die Behandlung der bisher als zugehörig angesehenen Familiennamen ein.

Einzig für die Gattung Asterocalamites

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[2]) Dass er ihn nicht *an*genommen hat, wird ihm wohl kaum jemand verdenken.

Zeiller (der Name als synonym mit Archaeocalamites betrachtet) wurde von Potonié (Lehrbuch der Pflanzenpalaeontologie etc. 1899, p. 183) erstmalig eine besondere Familie eingerichtet, der er den Namen Protocalamariaceae gab. Dieser Name ist illegitim nach Art. 9 und Art. 18, weil er sich weder auf den Stamm des Namens der betreffenden Typus-Gattung, noch ein Synonym dafür stützt. Dasselbe gilt für die Wiederholungen: Potonié, H., Die Silur- und die Culmflora etc., in: Abh. kgl. preuss. geol. Landesanst. Berlin, N. F., Hft. 36, 1901, p. 86; Potonié, H., Protocalamariaceae in Engler, A. et Prantl, K., Die natürlichen Pflanzenfamilien etc., I. Teil, 4. Abt., 1902, p. 558; Zalessky, M., Pflanzenreste aus dem Unteren Carbon des Msta Bassins, in: Bull. Soc. Imp. Minér. St. Pétersbourg, XLII, 2, 1905, p. 317; Jongmans, W. J., Anleitung zur Bestimmung der Karbonpflanzen West-Europas etc., Bd. I, 1911, p. 32.

Einen Sonderfall stellt der Gebrauch des Namens Protocalamariaceae durch Göbel, F. in: Centralbl. f. Miner., 1906, p. 242 dar. Hier erscheint nämlich der *Gattungsname* Protocalamites zum erstenmal in der Literatur. Die Veröffentlichung ist jedoch nicht gültig nach Art. 5, weil die Familie in Untergattungen gegliedert ist, die ihrerseits die Gattung enthalten. Nach Art. 12 besteht der Name nicht.

Die erste gültige Veröffentlichung der Gattung Protocalamites ist bei genauer Erwägung von Für und Wider aller involvierten Artikel nicht einfach zu konstatieren, doch bin ich geneigt, die Erwähnung bei Scott (Studies in Fossil Botany, 2. ed., Vol. I, 1908, p. 37, Fig. 11) als eine nicht gültige nach Art. 33 (2) anzusehen und gebe den Vorrang Lotsy (Vorträge über Botanische Stammesgeschichte, Bd. II, 1909, p. 528, Fig. 352), jedoch in der Weise, dass der Autor Scott ex Lotsy zu zitieren ist, wobei ich mich an Empfehlung 46A halte, die zwar auf den Tatbestand nicht ganz genau zutrifft, weil der erste, der den Namen Protocalamites pettycurensis für Calamites pettycurensis Scott vorschlug, Lotsy war, wie Scott (loc. cit.) angibt, so dass die Schreibweise Protocalamites (Scott) Lotsy ex Scott ex Lotsy eigentlich korrekt wäre. Indessen lässt die Empfehlung 46A die Form Protocalamites Scott ex Lotsy als Abkürzung zu, und der Gerechtigkeit an beiden Autoren und dem Art. 46 ist damit auch wohl genüge getan.

Diese Gattung Protocalamites zog nun Potonié (Grundlagen der Pflanzen-Morphologie etc., 1912, p. 193) zu seiner Familie Protocalamariaceae, womit die Anforderung des Art. 9, resp. 18 scheinbar, tatsächlich jedoch nicht, erfüllt ist, weil die Familie ja auf den Typus von Archaeocalamites unter dem inkorrekten Namen Asterocalamites gegründet war, der nach den bisherigen Untersuchungen als von dem des Protocalamites generisch verschieden angesehen werden muss (Scott, D. H., Studies in Fossil Botany, 3. ed., 1920, p. 32; Walton, J., On Some Lower Carboniferous Equisitineae from the Clyde Area, in: Trans. Roy. Soc. Edinburgh, LXI, 26, 1949, p. 734, 735).

Der illegitime Name Protocalamariaceae findet sich ferner in: Potonié, H. et Gothan, W., Lehrbuch der Paläobotanik, 2. Aufl., 1921, p. 160, 180-182 und — noch sehr spät — in: Gothan, W. et Weyland, H., Lehrbuch der Paläobotanik, 1954, p. 200, wo Protocalamites wieder ausgeschlossen ist. Am letztgenannten Ort wird die Gattung Mesocalamites Hirmer als Form zweifelhafter Stellung bezeichnet.

N.B.: Auf die verschiedenartigen Auffassungen der Autoren hinsichtlich der Stellung von Autophyllites Grand'Eury, Sphenasterophyllites Sterzel und anderen isolierten oder nicht ausreichend bekannten Formen, die bald mit Archaeocalamites "gemeinsam besprochen", bald "bis auf weiteres angereiht" werden und besser suspendierte Gattungen bleiben (Art. PB 1, Anm. 2 und Empfehlung PB 6C) gehe ich hier nicht näher ein, sondern betrachte nur die Änderungen, die die Haupt-Typen Archaeocalamites, Protocalamites und Mesocalamites als wesentliche Mitglieder oder Nicht-Mitglieder der Familie betreffen.

Inzwischen hatte Hirmer (Handbuch der Paläobotanik, Bd. I, 1927, p. 377) die Familie Asterocalamitaceae auf Archaeocalamites unter dem inkorrekten Namen Asterocalamites subjektiv richtig gegründet. Hier sind zum erstenmal die anderen Spezies der Gattung namentlich mitaufgeführt. Protocalamites und Mesocalamites gelten als Nicht-Mitglieder der Familie. Sie stehen bei den Calamitaceae.

Dieser Einteilung folgte Zimmermann (Die Phylogenie der Pflanzen, 1930, p. 166).

Walton dagegen (An Introduction to the Study of Fossil Plants, 1. ed., 1940) hielt zwar seine Anordnung (loc. cit., p. 63) für nicht verschieden von der Hirmers, gliederte aber die Gattungen Protocalamites und Mesocalamites seiner Familie Asterocalamitaceae ein (loc. cit., p. 86, 87). Dieser Auffassung blieb er treu (loc. cit., 2. ed., 1954, p. 65, 88-91), nur ist hier die Familie um die in-

zwischen von ihm beschriebene Gattung Protocalamostachys bereichert.[3])

In Engler, A. et Melchior, H. et Werdermann, E., Syllabus der Pflanzenfamilien etc., 12. Aufl. Bd. I, 1954 hat Reimers (loc. cit., p. 284) für Asterocalamitaceae als Gattung allein Asterocalamites angegeben.

Endlich ist noch die von Ogura (Anatomie der Vegetationsorgane der Pteridophyten, in: Linsbauer, K. et Tischler, G. et Pascher, A., Handbuch der Pflanzenanatomie, II. Abt., Bd. VII, 2, 1938, p. 230) erwähnte Unterfamilie Archaeocalamariaceae (sic !) zu nennen, deren Beschreibung jedoch so überaus dürftig ausgefallen, und deren Charakter daher so vage ist, dass hier — man ist versucht zu sagen: noch nicht einmal — der Art. 38 wirksam wird. Im Sinne der Präambel des Pariser Code hatte Ogura keine massgeblichen Gründe, Rang und Namen Asterocalamitaceae zu ändern, da er doch den illegitimen Namen Asterocalamites neben Archaeocalamites beibehalten und offensichtlich also keine rechte Einsicht in die nomenklatorischen Verhältnisse besessen hat. Sicherheitshalber wird der Unterfamilienname Archaeocalamariaceae Ogura nach Art. 63 (2) verworfen.

Verworfen werden ferner die Namen Protocalamariaceae und Asterocalamitaceae, und zwar — gleichviel ob Asterocalamitaceae als auf ein *illegitimes Synonym* gegründet angesehen, und deshalb nach *Art. 18* verteidigt werden sollte, oder nicht — weil ihre weitere Verwendung, nachdem dargelegt worden ist, in welchem Masse beide nebeneinander und in wie verschiedenem Sinne jeder von ihnen in der Literatur vorkommt, ganz sicherlich der Präambel des Code widersprechen würde, wo es heisst: "... durch seine Anwendung werden Namen vermieden und verworfen, die zu Irrtümern oder falschen Deutungen Anlass geben oder Verwirrung in der Wissenschaft anrichten können." Die bisherige Verwirrung wäre zweifellos noch gesteigert, wenn nun, nachdem die Legitimität von Archaeocalamites unwiderleglich nachgewiesen worden ist, die auf diese Gattung als ihren *nomenklatorischen Typus* sich gründende Familie *Aster*ocalamitaceae heissen sollte. Ich lehne also Protocalamariaceae und Asterocalamitaceae nach Art. 63 (2) und Art. 65 ab und errichte die Familie *Archaeocalamitaceae*, die ich folgendermassen beschreibe:

Der nomenklatorische Typus der Familie Archaeocalamitaceae ist die Gattung Archaeocalamites Stur mit ihrem nomenklatorischen Typus, der Art Archaeocalamites radiatus (Bgt.) Stur (Die Culm-Flora etc., in: Abh. kk. geol. Reichsanst. Wien, Bd. VIII, Hft. 1, 1875, p. 2-19, Taf. I, Fig. 3-8; Taf. III; Taf. IV; Taf. V, Fig. 1, 2). Die Familie schliesst ausserdem gemäss dem letzten Stande der Forschung folgende Elemente ein:

1) in der Gattung *Archaeocalamites* die Arten: *A. beyrichii* Weiss (Beiträge zur fossilen Flora III, Atlas, Steinkohlen-Calamarien II, 1884, Taf. 27, Fig. 1, und deren Beschreibung)

A. esnostensis (Renault) (Notice sur les Calamariées I, in: Bull. Soc. Hist. Nat. Autun, VIII, 1895, p. 35-38, Pl. II)

A. goeppertii Solms-Laubach (Ueber die in den Kalksteinen des Culm von Glätzisch Falkenberg enthaltenen Structur bietenden Pflanzenreste, III. Abh., in: Bot. Ztg., LV, 1897, p. 221-224, Taf. VII)

A. latixylon (Renault) (Notice sur les Calamariées I, in: Bull. Soc. Hist. Nat. Autun, VIII, 1895, p. 38, 39)

A. lohestii (Renier) (Asterocalamites Lohesti n. sp. etc., in: Ann. Soc. Géol. Belgique, Mém. in-4°, II, 1910, p. 31-34, Pl. VI, Fig. 2, 3)

2) die Gattung *Pothocites* Paterson (Description of Pothocites Grantonii etc., in: Trans. Bot. Soc. Edinburgh, I, 1, 1841, p. 45-62, Pl. III) mit den Arten:

P. calamitoides Kidston (On the Affinities of the Genus Pothocites, Paterson etc., in: Ann. and Magaz. Nat. Hist., Ser. 5, XI, 1883, p. 305-307, Pl. XII, Fig. 13, 15-17)

P. grantonii Paterson (Description of Pothocites Grantonii etc., in: Trans. Bot. Soc. Edinburgh, I, 1, 1841, p. 45-62, Pl. III)

P. patersonii Etheridge (Note on the Further Discovery of a Species of Pothocites

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[3]) Nach mündlicher Mitteilung (7. Mai 1958) möchte Herr Prof. Walton Mesocalamites nicht mit Archaeocalamites in eine Familie eingeschlossen und seine Ausführungen (loc. cit.) dahingehend interpretiert wissen, dass für Mesocalamites "rather an intermediate family" zu errichten sei. Die Mutmassung, es könne ein natürliches Verwandtschaftsverhältnis zwischen Protocalamites und Mesocalamites obwalten, lässt er auf sich beruhen. Da ich demnächst eine genaue Bearbeitung der unterkarbonischen Equisetales-Strukturen beabsichtige, halte ich eine eigene Initiative in dieser Sache noch für verfrüht. Mesocalamites fällt also einstweilen an Calamitaceae Hirmer zurück.

(Paterson) etc., in: Trans. Bot. Soc. Edinburgh, XII, 1874, p. 151)

P. species Etheridge (On a new Locality for Pothocites (Paterson), in: Trans. Bot. Soc. Edinburgh, XII, 1874, p. 162)

P. species Potonié (Lehrbuch der Pflanzenpalaeontologie etc., 1899, p. 186)

3) die monotypische Gattung *Protocalamites* Scott ex Lotsy mit ihrer Art: *P. pettycurensis* Scott ex Lotsy (Vorträge über Botanische Stammesgeschichte, Bd. II, 1909, p. 528, 529, Fig. 352, 353, II)

4) die monotypische Gattung *Protocalamostachys* Walton mit ihrer Art: *P. arranensis* Walton (On Some Lower Carboniferous Equisetineae from the Clyde Area, in: Trans. Roy. Soc. Edinburgh, LXI, 26, 1949, p. 729-732, Fig. 1; Pl. I)

Inwieweit Teile anderer Organgattungen, z.B. von Asterophyllites Brongniart wo möglich in diese Familie einzubeziehen wären, kann ich noch nicht entscheiden. Ich beabsichtige die Taxonomie dieser Gebilde gesondert zu bearbeiten.

Die Familie Archaeocalamitaceae gehört der Ordnung der Equisetales an.

Ich nehme die Gelegenheit wahr, der Deutschen Forschungsgemeinschaft, Bad Godesberg, der Faculty of Science, University of Glasgow, Herrn Prof. Dr. Walter Zimmermann, Tübingen und Herrn Prof. John Walton, Sc.D., D.Sc., Glasgow bestens zu danken.

K. U. L.

NOMENCLATURAL NOTES ON DATURA L.

F. R. Fosberg (Falls Church, Va.)

During the course of routine verification of places of publication and dates of names used by Avery, Satina and Rietsema in their forthcoming book, *The Genus Datura,* it became evident that much nomenclatural confusion has accumulated in this genus. A complete list of names pertaining to the genus will be published in the volume by my associate, Miss M.-H. Sachet, and will embody the nomenclatural conclusions arrived at during its preparation. However, it seems desirable to present in considerable more detail than space allowed there the results of the application of the Code to some of these, and also to indicate certain other facts about the current use of several names in *Datura.* Therefore there are listed below the names which raise any nomenclatural problems and such remarks as apply thereto. Taxonomic dispositions are generally not attempted here. Generic synonymy is given first.

DATURA L. Gen. Pl. ed. 5: 83. 1754.
This is the correct name of the genus, sensu lato.

Stramonium Scop. Fl. Carniolica ed. 2. 1: 157, 1772.
Taken from Tournefort, with Tournefort's diagnosis, substituted in ed. 2 for *Datura* L. used in ed. 1. In it is included only *S. foetidum* Scop. which is nomenclaturally equivalent to *Datura stramonium* L., type species of *Datura.* Therefore *Stramonium* Scop. is a superfluous name for *Datura* L. and illegitimate.

Brugmansia Pers. Syn. 1: 216. 1805, (non Blume, 1828).
Correct name for the tree daturas if they are regarded as a separate genus.

Apemon Raf. Fl. Tellur. 2: 11. 1836.
If section *Ceratocaulis* Bernh. is regarded as a distinct genus *Apemon* will be its correct name. The description of *A. crassicaule* may be regarded as a combined generico-specific description.

Ceratocaulos Spach, Veg. Phan. 9: 69. 1840.
A superfluous name for *Apemon* Raf., as *Datura ceratocaula* Ort. is cited in the original synonymy of the type species of both of them, making them equivalent, nomenclaturally.

Pseudodatura van Zijp, Natuurk. Tijds. Ned. Ind. 80: 24. 1920.
Substitute name for *Brugmansia* Pers. (non *Brugmansia* Blume, 1828), therefore superfluous and illegitimate.

Apemon crassicaule Raf. Fl. Tellur. 2: 11. 1836.
Superfluous and illegitimate, as *Datura ceratocaula* Ort. is cited in synonymy.

Brugmansia bicolor Pers. Syn. 1: 216. 1805.
Superfluous and illegitimate, as *Datura sanguinea* R. & P. is cited in synonymy.

Brugmansia parviflora Paxt. Bot. Mag. 9: 3. 1842.

Invalid, as it is published in synonymy of *B. floribunda*. The latter is considered by Index Kewensis to belong to the genus *Juanulloa*.

Ceratocaulos daturoides Spach, Veg. Phan. 9: 69. 1840.

This is doubly illegitimate, as it was published under an illegitimate generic name and was superfluous when published. Both *Datura ceratocaula* Ort. and *Datura macrocaulis* Roth [sic] were cited in synonymy. Even though a combination using the epithet *ceratocaula* might be considered a tautonym, the Roth epithet was certainly available and accompanied by an excellent description.

Datura alba Rumph. ex Nees, Trans. Linn. Soc. 17: 73. 1837.

It seems that a strict interpretation of the Code, Art. 46, Rec. 46A, and Rec. 50D requires that in this case the author citation be as given above in spite of the fact that Rumphius was a pre-1753 author. This name was published by Nees but ascribed to Rumphius, with, in addition, of course, a citation of a Rumphian polynomial. The point of difference between this and cases to which Rec. 50D applies is that Nees published this name after 1753 with Rumphius indicated as author. It might be argued that since there is, in effect, a reference to a description by Rumphius the two authors should be connected by *in* rather than *ex*. However, this is a name which was "proposed but not *validly* published by one author and is subsequently validly published and ascribed to him by another author", so Rec. 46A seems to apply.

Datura arborea R. & P. ex Persoon, Syn. 1: 216. 1805 in synonymy of *Brugmansia candida* Pers.

Ruiz and Pavon did not publish this name as new in their Flora Peruviana (2: 15, t. 128, 1799) but merely misidentified their plant as *D. arborea* of Linnaeus. Their description is the basis of *B. candida* Pers. which probably should not be regarded as superfluous since Persoon definitely ascribed his synonym to R. & P. without mention of Linnaeus.

Datura arborescens Gubb, Fl. Algeria *t. 66.* 1909.

This name is probably an error for *D. arborea* L. as there is no indication that Gubb intended to publish a new name. The plant illustrated seems to be *D. suaveolens* H. & B. ex Willd., as its fruit is narrowly fusiform and at least some, if not all, of the references to *D. arborea* L. or *Brugmansia arborea* (L.) Steud. in cultivation are actually probably *D. suaveolens* (cf. Degener, Fl. Haw. 318 B.A. 7/30/'32), as they have narrowly fusiform fruits rather than the almost globose ones of *D. arborea*. That this error persists is probably due to extreme rarity with which this plant fruits in cultivation. No description accompanies the publication of *D. arborescens* Gubb.

Datura bojeri Delile, Index complectens semina in horto botanico regio Monspeliensis anno 1836 collecta ....

Description seen only as quoted in a review by Aug. de St.-Hilaire, Ann. Sci. Nat. Bot. ser. 2. 7: 286, 1837. One can only heartily agree with St.-Hilaire who deplores the mixing of valuable information with ephemeral data in such catalogues. The name is presumably validly published and legitimate; probably to be referred to *D. metel*, judging by the description.

Datura capensis Hort. ex Bernh. Tromms. N. Jour. Pharm. 26: 151. 1833, in synonymy of *D. stramonium*.

Apparently not published except in synonymy, hence invalid.

Datura carthaginensis Hort. ex Sieb. & Voss, in Vilmorin's Blumengart. ed. 3. 1: 728, 1895, in synonymy of *D. metel*.

Apparently not published except in synonymy, hence invalid.

Datura cornucopaea W. W. in The Garden 46: 224, p. 978. 1894.

Here, in a discussion of *D. fastuosa* L. a binomial is used to designate a variety, "It [*D. fastuosa*] varies considerably, about a dozen named varieties of it being known in Continental gardens, the names being more or less descriptive of the flowers, such as alba, coerulea, atro-carminea, lilacina, violacea, alboplena, flava plena, etc. To these must be added *D. cornucopaea* fl.-pl., the plant represented in the plate ...." This is followed by a long discussion containing much descriptive information and an excellent colored plate labelled *Datura cornucopoea* Fl. Pl. This is presumably to be rejected under Art. 24. Perhaps it also falls as a polynomial, by the addition of the "fl.-pl.".

Datura de-noteri Sollier ex de Noter, Le Jardin 25: 238. 1912.

Described informally but apparently validly

published by de Noter, quoting at length from a letter from Sollier who sent him the seeds from the Cape region of Africa. Apparently not a *Datura*.

Datura discolor Bernh.

The name *Datura discolor* Bernh. is commonly applied to a species common in the southwestern United States, Mexico, and perhaps the West Indies. It belongs to Sect. *Dutra*., characterized by nodding capsules which do not dehisce regularly into four valves but break irregularly. The plant to which the epithet *discolor* is usually applied has the capsules glandular and covered with long slender pubescent spines, is slightly pubescent but the leaves are not conspicuously whitish beneath. The corolla is 14 to 16 cm. long and 10-toothed.

Datura discolor Bernh., Trommsdorf, Neue Jour. Pharmacie 26: 149. 1833 was based on the pre-Linnaean polynomials:

Stramonium americanum minus, Alkekengi folio. Tourn. Inst. p. 119. Boerh. Ind. 1. 261.

Stramonia corassavica humilior, Hyoscyami folio. Herm. Parad. Bat. p. 233. c. ic. (1689).

Both Bernhardi, and, after him, Dunal, who amplified the description, place the species in Sect. *Stramonium*, characterized by erect capsules dehiscing in four valves. Neither of them specifically mention these characters except by implication, but Hermann, who describes the plant in detail says "*in quatuor partes dehiscens . .*." His plate is very poor but shows a plant with small flowers with corolla less than twice the length of the calyx. Both Bernhardi and Dunal further agree on leaves "*subtus pubescenti-incani*" and capsules "*muricato-aculeati*", both of which characters as well as the small flowers shown by Hermann do not agree with the plant now generally known as *D. discolor*. It seems clear that this name is incorrectly applied to the plant in question, but it is by no means certain to what plant it does apply.

Mr. A. S. Barclay, who kindly supplied me with notes and a photo of the type of *D. thomasii* Torr., regards the plate of *Stramonia corassavica humilior, Hyoscyami folio* of Hermann as the type of *D. discolor*, having found no Bernhardi specimen which could be the type in the Bernhardi collection in the herbarium of the Missouri Botanical Garden. I am inclined to agree, except that I think the plate plus the description should be the type. This plate definitely shows a plant with corollas much less than twice the length of the calyces. There is, however, a suggestion that the capsules are nodding rather than erect. This, and the incanous pubescent leaves are obstacles to considering it to be a form of *D. stramonium*, which the plate otherwise resembles.

The nodding capsules of this plate, plus the black seeds of the plant commonly called *D. discolor* suggest that the difference between sections *Stramonium* and *Dutra* tend to break down, though they have appeared adequate to Blakeslee and associates in their intensive genetic and cytological work on the genus.

The plant called *D. discolor* in the southwestern U.S. and Mexico (and the West Indies?) should presumably be called *D. thomasii* Torr., as the Thomas collection from Fort Yuma, Calif. on which Torrey based the species, is, according to Mr. Barclay, a rather depauperate specimen of what passes for *D. discolor*. He notes that its "fruits are covered with glandular trichomes and appear to be 4-valved and regular". This suggests that the sectional position of this plant might need further study, or, again, that the differences between the two sections are weak. Presumably these matters will be dealt with when Mr. Barclay treats the species in his planned monograph of the genus.

*Datura *dubia* Persoon, Syn. 1: 216. 1805.

This name is of uncertain application, very briefly and inadequately characterized and indicated by Persoon by the asterisk as an obscure species. It is based on a specimen from the Richard herbarium. The only chance of identifying this plant is to locate this specimen or a duplicate of it, perhaps in the Paris Herbarium.

Datura ferox L. Amoen Acad. 3: 403. 1756.

This is apparently ultimately based on *Stramonium ferox* Boccone, Ic. Descr. rar. pl. 50-52, 1674, as this is the earliest reference and also that from which the specific epithet comes. The rather ample description and recognizable plate correspond well with current interpretations of the species.

Datura frutescens Hort. ex Siebert and Voss, in Vilmorin's Blumengartnerei ed. 3. 1: 727. 1895.

Invalid, published in synonymy of *D. knightii*.

Datura gigantea Hort. ex Lubbock, Seedlings 2: 297. 1892.

This will doubtless always remain a *nomen*

dubium, as it is based on the description of a seedling only.

Datura huberiana Hort. in Wien. Ill. Gart.-Zeit. 16: 157, *fig.* 34. 1891.

The name is applied to the illustration, which is mentioned in the text, but the descriptive remarks in the text do not specifically refer to the plant called by this name. The binomial, then, applies only to the illustration which is a double-flowered plant, probably a form of *D. metel* L.

Datura hummatu Bernh. Trommsd. N. Jour. Pharm. 26: 153. 1833.

This name is illegitimate, as several available earlier names are cited in the synonymy of the varieties, including *D. dubia* Pers. (1805), *D. muricata* Bernh. (1818), and, indirectly, *D. fastuosa* L. (1759), since one variety is called b. *fastuosa* (L.). The mere fact that these are all synonyms of varietal names makes no difference, since according to Art. 25 of the Code, for nomenclatural purposes the circumscription of a species includes the varieties of it recognized by the circumscribing author.

Datura hummatu var. *rubra* Bernh. loc. cit.

This was the only variety proposed as new of those recognized by Bernhardi under his *D. hummatu*. It is illegitimate as it was published under an illegitimate specific name, which forms part of the resulting trinomial. Art. 7 notes 3 and 4 do not apply here unless the epithet *rubra* is transferred to another combination.

Datura hybrida Tenore, Cat. Pl. Horti Regii Neapolitani 34. 1813.

This is a nomen nudum as published here. Bernhardi and others refer to it as published in Tenore's Prodromus Fl. Neap. App. 4: 34. 1823, where it is described adequately to effect valid publication but scarcely enough to identify it without examination of Tenore's original specimens, if they exist.

Datura inoxia Mill. Gard. Dict. ed. 8. 1768 (unpaginated).

Miller's original spelling of the specific epithet with a single *n* has generally been ignored following its "correction" to *innoxia* by de Chazelles and Holandre, translators of the Gardeners Dictionary into French (Belgian edition) in 1787. With the present rather ambiguous wording of Article 73 of the Code it is hard to be positive as to the correctness of either spelling of this epithet. It seems to be a fact that Miller deliberately spelled the word with one *n*. He uses the adjective "*inoxiis*" spelled with one *n* twice in the paragraph describing this species, and apparently considered this the preferable spelling. Therefore the case seems to be comparable to the first two examples accompanying this article, where we are instructed to retain the spellings *Mesembryanthemum* L. and *Amaranthus* L. in preference to the philologically preferable spellings because Linnaeus deliberately chose these spellings. The correct spelling according to the Code would then seem to be "*inoxia*".

Datura laevis Schkuhr, Bot. Handb. 1: 140. 1791.

Schkuhr, under *Datura fastuosa* L., says, "Eine Abart hiervon, wovor ich sieihalt [sic] ist im heisigen medicinischen Garten unter dem Namen Datura laevis, mit glatter Frucht, welche eben so wie die vorige mit kurzen wellenformigen Warzen besetzt ist; sie stehet aber mehr aufrecht als niedergebogen. . . ." This description is ample but I assume that this name is to be rejected under the provision in paragraph 4 of Art. 24, since it is a binomial used for an "Abart", certainly an infraspecific taxon. Presumably the words "not admissible" mean that the name is to be rejected, though it might be better to say so. (See also discussion under *D. cornucopaea*).

In any event, the name is illegitimate because it is a later homonym of *D. laevis* L.f.

Datura leichhardtii F. v. M. in Benth. Fl. Austr. 4: 468. 1869.

First published with a description in 1869, but earlier used as a *nomen nudum* by von Mueller, Trans. Phil. Soc. Victoria 1: 20. 1855.

Datura lurida Salisb. Prodr. 131. 1796.

Illegitimate as it was published as a substitute name for *D. stramonium* L.

Datura meteloides DC. in Dunal, DC. Prodr. 13(1): 544. 1852.

The discrepancy between the original description of *Datura meteloides* DC. and the plant commonly known by that name in the southwestern U.S. and northern Mexico, first pointed out by Regel (Gartenfl. Pl. 260, 1859), and noted by Timmerman (Pharmaceut. Journ. [London] 118: 572. 1927), was discussed in detail by Ewan in Rhodora 46: 317-323. 1944, and the drawing on which *D. meteloides* is based he reproduces as Plate 838. There is no need to repeat these arguments here, except to point out the circumstances that seem to lead to a different conclusion from that reached by Ewan.

In the first place, the copy of the Sesse and Mocino drawing, though it does not correspond with plants known from central Mexico (except perhaps the *Palmer* collection at Kew cited by Timmerman) might very well be a drawing of *D. inoxia* Mill., except for the short spines of the capsules. The spines are no better match for those of the plant commonly known as *D. meteloides*. *D. inoxia,* although not perhaps known from central Mexico, could have been picked up in the more tropical parts of Mexico which Sesse and Mocino certainly had to cross, or elsewhere, as it is a very wide-ranging species.

In any event, granting the resemblance to *D. inoxia* and the existence of the Palmer specimen mentioned by Timmerman which answers Dunal's description, the central point of Ewan's argument no longer holds. He recommends retaining the name *D. meteloides* DC. for the common southwestern American plant, presumably because "this name cannot be shown to be a misapplied binomial because no other species of *Datura* has been found in central Mexico which agrees with the original description nor with the drawing upon which it is based." It seems clear that *Datura meteloides* DC. may best be relegated to synonymy under *D. inoxia* Mill. If examination of the Palmer collection in Kew shows that this is not *D. inoxia* and that it matches the drawing better than does *D. inoxia,* then *D. meteloides* could be applied to it.

This course leaves us free to take up the unequivocal name *Datura wrightii* Regel for the plant now generally known as *D. meteloides* DC. We can agree with Ewan in typifying Regel's species by *Wright 526* (US) since material studied by Regel seems to be lacking, but must insist that it be designated a *neotype* rather than a *lectotype,* in accordance with present provisions of the International Code of Botanical Nomenclature (Art. 7 Note 3, 1956).

A more general point brought up by this discussion is whether or not a name should be applied to a plant which does not correspond to its description merely because it cannot be otherwise shown to be misapplied. It seems clear enough to me that if the description on which a name rests does not fit a known plant, and if no authentic type material may be associated with the name, the name should be regarded as of dubious status (*nomen dubium*) and treated as such until such time as it may be typified by the discovery of authentic material or as new information may associate it with a plant which does actually correspond with its description. Even though the suggestion of an article for the Code formalizing *nomina dubia* was rejected at Stockholm there is nothing whatever to prevent the placing of names in such a category. It is done, in effect, in most monographs, where lists of doubtful and excluded names are commonly appended.

Datura muricata Bernh. Cat. Sem. Hort. Erfurt 1818: N. Allg. Garten-Mag. ser. 2. 4: 159. 1827.

The seed catalog of the Erfurt Garden does not seem to be available anywhere in the U.S. nor in Paris nor Geneva, at least the 1818 number. However, we have information, kindly supplied by the Conservateur of the Library of the Natural History Museum, Paris, that other numbers of this catalog give names, only, without descriptions. It may probably be safely assumed that this is also true of the 1818 number and that *D. muricata,* as published there is a *nomen nudum.* If this is true, then the 1827 publication of this name is a later homonym of *D. muricata* Link, Hort. Ber. 1: 177. 1821, and therefore illegitimate. Bernhardi, on p. 163 of the same publication (1827) reduces his *D. muricata* to synonymy with *D. fastuosa* var. *alba,* and regards his name and that of Link as the same. They are doubtless not the same, either taxonomically or nomenclaturally, as they belong in different sections of the genus and Link was clearly enough describing a new species, though he nowhere says so, and he does not refer to Bernhardi's name.

Datura nigra Rumph. ex Hassk. Cat. Hort. Bogor. alter 142. 1844.

The correct author citation of this is as above, since Hasskarl ascribed it to Rumphius and referred to the description and illustration in the Herbarium Amboinense (See discussion under *D. alba* Rumph. ex Nees).

Datura nilhummatu Dunal in DC. Prodr. 13(1): 542. 1852.

Dunal cites "D. Tatula dubia Pers. syn. p. 216" in the synonymy of his var. *α,* but Persoon's plant was not described as a variety, but as a species. Even though Persoon's species is generally considered obscure Dunal included it in his circumscription of *D. nilhummatu* and the name was available. Therefore *D. nilhummatu* was superfluous when published and is illegitimate.

Datura parviflora Salisb. Prodr. 131. 1796.

Illegitimate as it was published as a substitute name for *D. tatula* L.

Datura pseudo-stramonium Sieber ex Bernh. Trommsd. N. Jour. Pharm. 26: 151. 1833.

Invalid as it was published only in synonymy.

Datura sanguinea var. *flava* Benth. in Dunal, in DC. Prodr. 13: 545, 1852.

This was ascribed to Bentham, Pl. Hartw. 239. 1846, but Bentham did not propose the varietal epithet there, merely referring to a "var? floribus flavis", so the formal publication of the name seems to date from Dunal.

Datura sarmentosa Lam. Tabl. Encycl. 2: 9. 1793.

Based on *Solandra grandiflora* Sw. (1787) which is cited in synonymy, therefore *D. sarmentosa* is superfluous, illegitimate, and a synonym of *S. grandiflora* Sw.

Datura speciosa Salisb. Prodr. 131. 1796.

Illegitimate as it was published as a substitute name for *D. arborea* L.

Datura stramonium var. *chalybea* Koch, Syn. Fl. Germ. Helv. 510. 1837.

D. tatula, cited in synonymy, was used in varietal rank by Torrey, Fl. North & Middle U.S. 1: 232, 1824. Therefore it should have been taken up by Koch, so var. *chalybea* is superfluous and illegitimate.

Datura thomasii Torr. Pac. R.R. Rep. vol. 7, app., art. 7: 363. 1857.

Probably the correct name for what has usually been called *D. discolor,* which see.

Datura timoriensis Zipp. ex Spanoghe, Linnaea 15: 337. 1841.

Published in synonymy of *D. metel,* therefore invalid.

Datura wagmânni Steud. Nom. ed. 2, 1: 484. 1840.

Orthographic or typographic error for *waymanni* Paxt. which Steudel transfers from *Brugmansia* to *Datura.*

Datura wrightii Regel, Gartenfl. *pl. 260.* 1859.

The correct name for what is generally known as *D. meteloides* DC., which see.

Solandra herbacea Mordant de Launay, Herb. Gén. Amat. 3: *pl. 207.* 1819.

This is a transfer of *Datura ceratocaula* Ort. to *Solandra* with substitution of the epithet *herbacea* for *ceratocaula.* The binomial is superfluous and illegitimate, as two legitimate names, *D. ceratocaula* Ort. and *D. macrocaulis* Roth are cited as synonyms.

Stramonium arboreum (L.) Moench, Meth. Suppl. 173. 1802.

Illegitimate transfer as the generic name is illegitimate.

Stramonium fastuosum (L.) Moench, Meth. 456. 1794.

Illegitimate transfer as the generic name is illegitimate.

Stramonium foetidum Scop. Fl. Carn. ed. 2. 1: 157. 1772.

Probably created to avoid a tautonym when Scopoli took up the generic name *Stramonium* Tourn., but illegitimate on two counts. It was proposed under an illegitimate generic name, and in the synonymy is cited the Sp. Pl. reference to *Datura stramonium* L. This binomial should have been taken up, so *S. foetidum* is superfluous.

Stramonium laeve (L.f.) Moench, Meth. 456. 1794.

Illegitimate transfer as the generic name is illegitimate.

Stramonium metel (L.) Moench, Meth. 456. 1794.

Illegitimate transfer as the generic name is illegitimate.

Stramonium spinosum Lam. Fl. Franç. 2: 256. 1778.

Illegitimate on two counts, as it was published under an illegitimate generic name and *Datura stramonium* L. was cited in synonymy, rendering *S. spinosum* superfluous when published.

Stramonium tatula (L.) Moench, Meth. 456. 1794.

Illegitimate transfer as the generic name is illegitimate.

Stramonium vulgare Moench, Meth. 456. 1794.

Probably created to avoid a tautonym, as *Datura stramonium* L. is cited as a synonym. Illegitimate on two counts as with *S. foetidum.*

Stramonium vulgatum Gaertn. Fruct. 2: 243. 1791.

Also probably created to avoid a tautonym, as the synonymy includes a reference to *Datura pericarpiis spinosis erectis ovatis, foliis ovatis glabris* Linn. Syst. veg. 220 (ed. 14, 1784, Murray), which is exactly the Hortus Cliffortianus polynomial on which *Datura stramonium* L. is founded. Citation of this diagnosis, making the name equivalent to *D. stramonium* L., makes it superfluous. It is also illegitimate because proposed under an illegitimate generic name.

LEGUMINOSAE OF THE WESTERN HEMISPHERE

NOTES ON CHOICES OF LECTOTYPES

R. S. Cowan (Washington 25, D.C.)

In the course of preparing the texts for the Leguminosae of the Western Hemisphere for the Index Nominum Genericorum, it has been necessary and/or possible to make clear selections of lectotypes. Where an obvious choice was indicated by the circumstances, the lectotype was chosen; however, provisional I.N.G. cards will be supplied for many genera in this family which will ultimately require typification. I am convinced that lectotypes for these should be chosen by a worker studying the genus or group of genera in each case, for it will serve no useful purpose to burden subsequent monographers with the necessity of refuting a choice made now on less than adequate knowledge of the group.

A careful search has been made of the literature for actual or implied choices of lectotypes; still some have surely been overlooked. One of the most commonly consulted sources for such information is the list of "Standard Species" of A. S. Hitchcock and M. L. Green. The lectotypes designated in this list are, however, very frequently antedated, especially in the works of N. L. Britton and his associates. It is striking that Hitchcock and Green often independently selected the earlier choice of Britton et al. It may be freely admitted that the basis for selection of a lectotype by the latter workers was sometimes mechanical. But when all the possible choices are equally valid, what alternative is there but to arbitrarily choose any one of the original species when one is faced with the necessity of expressing such a choice? The "standard species" in the Hitchcock and Green List is sometimes based on sounder principles and should be upheld against an earlier but poorly selected lectotype.

The list which follows contains the choices of lectotypes which will appear on the I.N.G. cards for the leguminous genera of the Western Hemisphere and their synonyms. The generic names included are sufficiently few to make any subdivision of the list into subfamilies impractical and they are arranged alphabetically.

Abarema Pittier, Arb. y Arbust. Orden Legum. 56. 1927.
LT.: *A. trapezifolium* (Bentham) Pittier

When Pittier described this genus he included in it two of Bentham's species of *Pithecellobium*. Of these two the one selected here is better known and more typical of the genus morphologically. The lectotype cannot be *Pithecellobium Avaremotemo* Martius, which was chosen by Britton and Killip (Ann. N. Y. Acad. Sc. 35: 126. Apr. 1936), for the lectotype must be selected from among the original species.

Amoria Presl, Symb. Bot. 1: 43, *t. 30.* Oct. 1830.
LT.: *A. calycina* Presl

Two binomials were published at the time of the original description of the genus but only the one listed above was completely described and figured. The second binomial, *A. isthmocarpa* (Brotero) Presl, was published in a footnote on page 50 of the publication cited.

Andira Lamarck, Encyc. 1: 171. Dec. 1783 (nom. cons.).
T.: *A. racemosa* Lamarck

Only one species was published at the time of the description of the genus and must be considered to be the generic type rather than the species indicated in the list of nomina conservanda.

Bona Medicus, Vorl. Churpf. Phys. Ges. 2: 360. 1787.
LT.: *B. narbonensis* (Linnaeus) Medicus (*Vicia narbonensis* Linnaeus)

Two binomials were presented with the first description of the genus but the one selected here as lectotype is the best characterized and obviously more important in the author's concept of the genus. The status of the second species was dubious to its author, as indicated by an interrogation mark with its publication.

Cenostigma Tulasne, Ann. Sc. Nat., ser. 2, 20: 140, *t.* 3. 1843.
LT.: *C. macrophyllum* Tulasne

The author of this generic name included three species with his original description of the genus. They are of approximately equal value for lectotypes but the one selected has the additional quality of having been the only one of the original three which was illustrated.

Chloroleucum Britton et Rose ex Record, Trop. Woods 10: 24. June 1927.

In effecting publication of this genus Record anticipated its publication by Britton et Rose in the North American Flora. The form of the description would indicate that he supposed the name to have been validated previously and some might contend that he had no intention of publishing a new genus. The fact remains, however, that he did so and his publication must stand priority-wise against the later one by Britton et Rose which ignored altogether Record's pre-publication.

Chrysocalyx Guillemin et Perrottet, Fl. Seneg. Tent. 157, *t.* 43. 1832.
LT.: *C. ebenoides* Guillemin et Perrottet

This is the only species illustrated at the time of publication of the genus and the species included in it.

Cladrastis Rafinesque, Neogenyt. 1. 1825.
T.: *C. lutea* (Michaux, f.) K. Koch (*Virgilia lutea* Michaux, f.)

This is a monotypic genus in the Western Hemisphere and all the combinations made by Rafinesque and subsequent authors are referable to this binomial.

Dicymbopsis Ducke, Bol. Tecn. Inst. Agron. Norte, Para 19: 10. May 1950.
LT.: *D. amazonica* (Ducke) Ducke (*Dicymbe amazonica* Ducke)

The choice of lectotype for this genus is based on nothing substantial; simply the older of the two species included in the genus by the author has been designated. In other respects either of the two are equally suited for this distinction.

Elizabetha Schomburgk ex Bentham, Hooker Journ. Bot. 2: 92. March 1840.
LT.: *E. princeps* Schomburgk ex Bentham

The other species of the two included by Bentham in this genus is described by comparing its characteristics with those of the one chosen here as lectotype. It is obviously much less important than the latter in forming the author's concept of the genus.

Etaballia Bentham, Hooker Journ. Bot. 2: 99. 1840.
LT.: *E. guianensis* Bentham

The species selected as a lectotype for this genus unquestionably formed the principal element in the original generic description, for the one other species was almost incidentally characterized.

Gliricida Humboldt, Bonpland et Kunth, Nov. Gen. et Sp. (folio) 6: 309. Aug. 1824.

The spelling of the name adopted here is that originally used by the authors and actually more correct etymologically than *Gliricidia*, the spelling commonly used subsequently.

Lonchocarpus Humboldt, Bonpland et Kunth, Nov. Gen. et Sp. (folio) 6: 300. Apr. 1824 (*nom. cons.*).
LT.: *L. punctatus* Humboldt, Bonpland et Kunth

The lectotype for any genus must come from among the species published initially by the author and the one cited in the section of the Code on nomina conservanda was not one of these original species. The one listed above fulfills this qualification and was chosen to be the lectotype by Pittier (Contr. U.S. Nat. Herb. 20: 89. Aug. 1917).

Lumbricidia Vellozo, Fl. Flum. 305. 1825.
LT.: *L. anthelmia* Vellozo

Of the two species originally described this one is more completely characterized and seemingly more important in the generic description.

Monopteryx Spruce ex Bentham, Fl. Bras. 15(1): 307, *t.* 122. Jan. 1862.
LT.: *M. angustifolia* Spruce ex Bentham

This species is chosen as lectotype because it is the one species illustrated at the time of the original publication of the genus and its parts.

Piptadenia Bentham, Hooker Journ. Bot. 4: 334. June 1842.
LT.: *P. latifolia* Bentham

Brenan (Kew Bull. 1955: 178) designated *P. rigida* Bentham as the lectotype for this genus but Britton et Wilson (Sc. Surv. Pto. Rico 5: 360. June 1924) had previously chosen the species listed above. This is a reasonable choice, for it was the most important species in Bentham's "Section I. Eupiptadenia" at the time of his initial description of the genus.

Platymiscium Vogel, Linnaea 11: 198. 1837.
LT.: *P. floribundum* Vogel

Only this species of the two originally described was completely characterized; the second species was only partly known to its author.

Platypodium Vogel, Linnaea 11: 420. 1837.
LT.: *P. elegans* Vogel

The author of the original description of

this genus supplied a long, complete description of the species selected here as lectotype but only a very incidental characterization of the one other species presented.

Rudolphia Willdenow, Ges. Naturf. Fr. Neue Schr. 3: 451. 1801.
LT.: *R. volubilis* Willdenow

This is most certainly the more important of the two species included in the original publication of this genus. It is also, by his statement, the only one of the two seen by the author.

Sebipira Martius ex Vogel, Linnaea 11: 385. 1837.
LT.: *S. major* Martius ex Vogel

This species is chosen as the lectotype because it was the only one known to Martius, the second species having been proposed by the publishing author. Martius (Reise 787. 1828.) originally used this name but he did not use it as a generic name. In that publication he employed both latin binomials and common names but he used different typography to distinguish the two classes of names. Because of this fact it is possible to determine that his original use of the name was as a vernacular epithet.

Sertula Kuntze, Rev. Gen. 1: 205. 1891.
LT.: *S. indica* (Linnaeus) Kuntze

This generic name was originally published in 1735 by Linnaeus; the only Linnaean species included by Kuntze at the time that he validated the genus is selected here as the lectotype.

Sphinctolobium Vogel, Linnaea 11: 417. 1837.
LT.: *S. virgilioides* Vogel

The legume character upon which Vogel founded the generic name is found only in the species selected above. The legume was not known of one of the other two original species and that of the third species was inconsistent with the generic description.

Zollernia Maximilianus et Nees, Nov. Act. Nat. Cur. 13(2): preface p. 13, *t. c et d.* 1826.
LT.: *Z. falcata* Maximilianus et Nees

Of the two species originally described this is the best represented in herbaria and it is more widely known. They were equally well characterized and both were figured originally.

REMARKS ON ALGAL NOMENCLATURE II

Paul C. Silva (Urbana, Illinois)*

VI. *Bibliographic notes on Gaillon's "Tableaux synoptiques et méthodiques des genres des Némazoaires."*

In a curious paper entitled "Aperçu d'histoire naturelle et observations sur les limites qui séparent le règne végétal du règne animal," which he read at a public meeting of the Société d'Agriculture, du Commerce et des Arts, de Boulogne-sur-mer on 19 September 1832, Gaillon amplified and summarized his previously published ideas on the animal nature of certain organisms usually classified as plants by his contemporaries and predecessors as well as by present-day workers. He defined these organisms as follows: "Les Némazoaires sont des productions tantôt filamenteuses, tantôt membraneuses, cloisonnées ou continues, formées d'une sorte de mucus sans tissu cellulaire apparent, constituées par des corpuscules internes doués d'animation et, à une certaine époque de leur existence, de la faculté locomotive." Although the history of the reaction of naturalists to Gaillon's ideas is interesting, including as it does a refutation by so eminent a person as Bory de Saint-Vincent (Dict. Class. Hist. Nat. 11: 501-503. 1827), the purpose of the present note is merely to call attention to the various editions of this interesting paper. It was duly published in the procès-verbal of the society in 1833, in that part of the volume entitled "Mémoires et Notices ...," pp. 93-114. A summary of genera included in the Némazoaires was appended, comprising eleven unnumbered pages, under the title "Tableaux synoptiques et méthodiques des genres des Némazoaires." This edition of the "Aperçu" is not listed in the Royal Society Catalogue of Scientific Papers. The "Aperçu" was also issued separately in the same year (1833) as a pamphlet of 24 pages without change of typography but with altered page make-up, together with the unchanged "Tableaux" of eleven unnumbered pages. This pamphlet, with identical typography and page make-

*) I am grateful to Professor G. F. Papenfuss for critically reading this manuscript and for making many helpful suggestions.

up, was also published with the pagination 1-35. The "Tableaux" were republished later in 1833 in Tome I of the Mémoires de la Société royale d'Émulation d'Abbeville, pp. 469-482, with different typography, altered page make-up, and some changes in text and in punctuation. That this version of the "Tableaux" was published later than the one in the Procès-verbal de la Société d'Agriculture etc. de Boulogne-sur-mer is clearly seen from the statement on page 587 regarding the séance of 6 September 1833: "M. B. Gaillon ... fait hommage à la Société d'une brochure dont il est l'auteur, ayant pour titre: 'Aperçu d'histoire naturelle, et observations sur les limites qui séparent le règne végétal du règne animal.'" The "Tableaux" were published once again, with changed typography, orthography, and page make-up, together with a review of the "Aperçu," in the Annales des Sciences Naturelles, Botanique, série 2, Tome 1, pp. 44-56, January 1834.

Curiously, Gaillon changed the spelling of the generic names of Némazoaires to conform to the diminutive ending, *-ella* (thus, *Bangia* became *Bangiella* and *Oscillatoria* became *Oscillatoriella*), perhaps justifying this alteration on the basis of the change in taxonomic status of the genera from plant to animal kingdom. None of his altered generic names was adopted by other workers. It is amusing to note, however, that Gaillon himself is commemorated by just such a name — *Gaillonella* — a genus of diatoms established by Bory in 1823 and removed to the Némazoaires by Gaillon, but without change of spelling. *Melosira* C. Agardh (1824) has been conserved against *Gaillonella* Bory. The application of the name *Gaillonella* (or more usually, its corruption, *Gallionella)* to a genus of iron bacteria with authorship attributed to Ehrenberg is without legal basis, inasmuch as Ehrenberg in describing *G. ferruginea,* the alleged type, considered it a diatom and merely assigned it to Bory's previously established genus (cf. Ehrenberg, Infusionsthierchen, pp. 166-169. 1838).

VII. *Myxotrix* and *Naematrix* E. M. Fries (*Ulotrichaceae*).

These two generic names have long been cloaked in mystery. Hazen (Mem. Torrey Bot. Club 11: 194. 1902) noted that Fries (Syst. Orb. Veg. 343. 1825) cited as a synonym of his new genus *Myxonema* (*nom. rejic.* vs. *Stigeoclonium* Kuetzing 1843, *nom. cons.*) "Naematrix *Stirp. Fems.*," but he was unable to find the latter name in the work quoted (Fries, Stirpium Agri Femsionensis Index). Instead, on page 44 he found "*Myxotrix zonata*" (presumably a transfer of *Conferva zonata* Weber et Mohr, now referred to *Ulothrix* Kuetzing 1833). Pfeiffer (Nomencl. Bot. 1874) lists both *Myxotrix* and *Naematrix,* the former with, the latter without, a page reference in "Stirp. fems." Suspicion that two different editions were involved was confirmed by Krok (Bibl. Bot. Suec. 201. 1925), according to whom this 100-page work by Fries was published twice at Lund, the place of publication originally being given as Londini Gothorum and later as Lundae. The latter edition was said to have appeared either with or without the dissertation title pages and to have incorporated certain textual changes. This work being rare, an opportunity to compare the two editions did not arise until by good fortune during the summer of 1957 I happened to find a copy of each edition in a Stockholm bookstore. In addition to the change of title indicated by Krok (from Stirpes Agri Femsionensis to Stirpium Agri Femsionensis Index), the Lundae edition comprises different fourth and fifth signatures (pp. 31-44). These two signatures, comprising the treatment of lichens and most of the treatment of algae, were replaced by a single 16-page signature, which was inserted between the unaltered third and sixth signatures. In order to make the pagination continuous, pages 42 and 43 were repeated (i.e., 42, 43, 42, 43, 44, etc.). On page 44 of the original (Londini Gothorum) edition, the binomial *Naematrix zonata* appears without description or synonymy. On page 44 of the Lundae edition this has been replaced by *Myxotrix zonata,* again without description or synonymy. Neither of these names, therefore, was validly published by Fries, although Trevisan (Alg. Udin. 16. 1844) published "*Myxothrix,* Fries" with a Latin description. Inasmuch as Trevisan employed *Myxothrix* as a presumed earlier synonym of both *Myxonema* E. M. Fries and *Stigeoclonium* Kuetzing, and in fact his five species are identical with the five species originally placed in *Stigeoclonium,* the logical lectotype is *M. tenuis* (C. Ag.) Trevisan (*Draparnaldia tenuis* C. Agardh), an isonym of the lectotype of *Stigeoclonium.*

A collation of the two editions of Fries's work follows.

I. Stirpes agri femsionensis ... praeside Elia Magno Fries ... p.p. Magnus G. Winding ... in Acad. carol. d. XXV maji

MDCCCXXV. Londini Gothorum, ex officina Berlingiana, MDCCCXXV [signature 1, pp. 1-16 (incl. title page)]. Continuatio I ... J. G. Arrhenius ... 11. vi. 1825 [signatures 2 and 3, pp. 17-30 (in this and the following sections the title page is not included in the pagination)]. Continuatio II ... Nicolaus Hemmes ... 11. vi. 1825 [signatures 4 and 5, pp. 31-44]. Continuatio III ... Sveno Ludov. Lovén ... 16. vi. 1825 [signatures 6 and 7, pp. 45-58]. Continuatio IV ... J. P. Hjelm ... 19. v. 1827 [signatures 8 and 9, pp. 59-72]. Continuatio V ... C. P. Snöberg ... 2. vi. 1827 [signatures 10 and 11, pp. 73-86]. Continuatio VI ... C. N. Ahnfelt ... 8. xii. 1827 [signature 12, pp. 87-100].

II. Stirpium agri femsionensis index ... El. Fries. Lundae. A Typographia Academica, 1825, 1826. 100 pp. (incl. title page). It is disconcerting to note the 1826 date on the title page of the Lundae edition, but a consideration of the changes made between the two editions leads to the conclusion that the Lundae edition is later, and hence the 1826 date must be in error.

VIII. *Proposal for conservation of generic name* (62).

Nomen conservandum propositum: Lyngbya C. Agardh ex Gomont, Ann. Sc. Nat. Bot., ser. 7. 16: 118. 1893. Oscillatoriaceae (Cyanophyta). Species lectotypica: *L. confervoides* C. Agardh ex Gomont.

Nomen rejiciendum propositum: Lyngbya Gaillon, Dict. Sc. Nat. [Levrault] 53: 393. 1828. Ectocarpaceae (Phaeophyta). Species lectotypica: *L. siliculosa* (Dillw.) Gaillon (*Conferva siliculosa* Dillwyn).

Support for conservation of this universally accepted generic name is already implied in the Code by Article 13 g, which provides that valid nomenclature for the Nostocaceae homocysteae (which includes *Lyngbya*) begins with Gomont's *Monographie* (1892-1893). It would be inconsistent with the intention of later starting points not to support conservation of a name used by a later starting point author but which is illegitimate because of the existence of an earlier homonym. Inversion of normal homonymic relationships, of which this is an example, is discussed fully elsewhere (Taxon 7: 182. 1958). Elimination of later starting points in algae would obviate the need for conserving *Lyngbya*.

IX. *Lemanea* Bory and *Sacheria* Sirodot (*Lemaneaceae*).

Sacheria was established by Sirodot (Ann. Sc. Nat. Bot. sér. 5. 16: 69. 1872) for those species of *Lemanea* Bory (Ann. Mus. Hist. Nat. [Paris] 12: 178. 1808, *nom. cons.*) that are characterized, in part, by having antheridia in papillae, carpogonia and carpospores developed primarily in the nodal zones, and the central filament in the sexual shoot naked. Among the species assigned to *Sacheria* was *L. corallina* Bory [= *Conferva fluviatilis* L.], which Bory had designated the type of *Lemanea*, and for this reason *Sacheria* is a superfluous and hence illegitimate name (cf. Art. 64). By excluding from his circumscription of *Lemanea* the original type, Sirodot in effect established a new genus bearing the later homonym *Lemanea* (cf. Art. 47 and 48). Ketel (Mitt. Naturw. Ver. Neu-Vorpommern u. Rügen 18: 15. 1887) reduced *Sacheria* to a subgenus of *Lemanea* and thus recognized the coordinate subgenus *Lemanea*. The latter was designated *Eulemanea* by Hamel (Rev. Alg. 2: 59. 1925) and goes by this name in current literature, although illegitimate according to Article 69(3). Ketel's treatment has been followed by most subsequent workers, even though both subgenera bear illegitimate names.

While it would be possible to maintain current usage of the names *Lemanea* and *Sacheria* by repealing the conservation of *Lemanea* Bory and simultaneously conserving *Lemanea* Sirodot and *Sacheria* Sirodot, this solution is so awkward and so flagrantly violates the type method by disregarding Bory's designation of holotype that it seems inadvisable. Therefore, I propose the substitute name **Paralemanea** for the illegitimate subgeneric name *Eulemanea* Hamel (lectotype species: *L. nodosa* Kuetzing). The subgenus *Sacheria* in accordance with Article 22 must bear the name *Lemanea* without citation of an author's name.

X. *Proposals of new names for later generic homonyms.*

The following later generic homonyms are excluded from consideration for conservation because the earlier homonym applies legitimately to a genus accepted by current or recent authors.

Pascherina nom. nov. *Pascheriella* O. A. Korshikov, Arch. Protistenk. 61: 232. 1928. Spondylomoraceae (Chlorophyta). Non *Pascherella* Conrad, Arch. Protistenk. 56: 221.

1926. Chrysapsidaceae (Chrysophyceae). Type (and only) species: **Pascherina tetras** (O. A. Korshikov) comb. nov. (*Pascheriella tetras* O. A. Korshikov, loc. cit.).

On page 168 of Conrad's paper there appears the binomial *Pascheria yserensis*, but later in the same publication this species is described as *Pascherella yserensis* gen. et sp. nov.

Phyllogloea nom. nov. *Gloeophyllum* O. A. Korshikov, Viznachnik Prisnovodnikh Vodorostei URSR. V. Protococcineae 76. 1953. Palmellopsidaceae (Chlorophyta). Non *Gleophyllum* P. A. Karsten, Bidr. Finlands Natur och Folk 37: x, 79. 1882. Polyporaceae (Basidiomycetes). Type (and only) species: **Phyllogloea fimbriata** (O. A. Korshikov) comb. nov. (*Gloeophyllum fimbriatum* O. A. Korshikov, op. cit. 77).

Dictyochlorella nom. nov. *Dictyochloris* O. A. Korshikov, Viznachnik Prisnovodnikh Vodorostei URSR. V. Protococcineae 216. 1953. Palmellaceae (Chlorophyta). Non *Dictyochloris* Vischer, Verh. Naturf. Ges. Basel 56: 42. 1945. Chlorococcaceae (Chlorophyta). Lectotype species: **Dictyochlorella globosa** (O. A. Korshikov) comb. nov. (*Dictyochloris globosa* O. A. Korshikov, op. cit. 217). Other species: **Dictyochlorella reniformis** (O. A. Korshikov) comb. nov. (*Dictyochloris reniformis* O. A. Korshikov, loc. cit.).

Korshikoviella nom. nov. *Lambertia* O. A. Korshikov, Viznachnik Prisnovodnikh Vodorostei URSR. V. Protococcineae 186. 1953. Characiaceae (Chlorophyta). Non *Lambertia* J. E. Smith, Linn. Trans. 4: 214. 1798. Proteaceae (Spermatophyta). Type species: **Korshikoviella gracilipes** (Lambert) comb. nov. (*Characium gracilipes* Lambert, Rhodora 11: 65. 1909). As emended by Fott (Preslia 29: 306. 1957), this genus includes four other species, namely, **Korshikoviella limnetica** (Lemm.) comb. nov. (*Characium limneticum* Lemmermann, Bot. Not. 1903: 81. 1903); **Korshikoviella schaefernai** (Fott) comb. nov. (*Lambertia schaefernai* Fott, op. cit. 304); **Korshikoviella michailovskoensis** (Elenkin) comb. nov. (*Characium michailovskoense* Elenkin, Not. Syst. Inst. Crypt. Hort. Bot. Ross. 3: 34. 1924); and **Korshikoviella setosa** (Filarszky) comb. nov. (*Characium setosum* Filarszky, Bot. Közl. 13: 10. 1914.

Nayalia nom. nov. *Oliveria* Nayal, Ann. Bot. 49: 209. 1935. Chaetophoraceae (Chlorophyta). Non *Oliveria* Ventenat, Descr. Pl. Jard. Cels, pl. 21. 1800. Umbelliferae (Spermatophyta). Type (and only) species: **Nayalia terrestris** (Nayal) comb. nov. (*Oliveria terrestris* Nayal, op. cit. 210).

Oliveria Ventenat commemorates G. A. Olivier, while *Oliveria* Nayal is named for F. W. Oliver.

Leptonematella nom. nov. *Leptonema* Reinke, Ber. Dtsch. Bot. Ges. 6: 19. 1888. Elachistaceae (Phaeophyta). Non *Leptonema* A. de Jussieu, Euphorb. 19. 1824. Euphorbiaceae (Spermatophyta). Type species: **Leptonematella fasciculata** (Reinke) comb. nov. (*Leptonema fasciculatum* Reinke, loc. cit.). Other species: **Leptonematella lucifuga** (Kuck.) comb. nov. (*Leptonema lucifugum* Kuckuck, Wiss. Meeresuntersuch. N.F., Abt. Helgoland, 2(1): 40. 1897).

Philippiella nom. nov. *Philippia* Kuckuck, Wiss. Meeresuntersuch. N.F., Abt. Helgoland 17(4): 19. 1929. Elachistaceae (Phaeophyta). Non *Philippia* Klotzsch, Linnaea 9: 354. 1834. Ericaceae (Spermatophyta). Type (and only) species: **Philippiella australis** (J. Ag.) comb. nov. (*Elachistea australis* J. Agardh, Lunds Univ. Ärsskr. 17 (Afd. 3, nr 4): 13. 1882).

Philippia Klotzsch commemorates R. A. Philippi, whereas *Philippia* Kuckuck was named for Port Phillip, Australia.

The following later generic homonyms probably should not be considered for conservation, even though the earlier homonyms are illegitimate, because of the limited distribution and literature of the genera.

Axillariella nom. nov. *Axillaria* Gruber, Bibl. Bot. 7(38): 17. 1896. Fucaceae (Phaeophyta). Non *Axillaria* Rafinesque, Am. Monthly Mag. Crit. Rev. 2: 266. 1818 (substitute name for *Polygonatum* Miller 1754). Liliaceae (Spermatophyta). Type (and only) species: **Axillariella constricta** (J. Ag.) comb. nov. (*Fucodium constrictum* J. Agardh, Sp. Alg. 1: 205. 1848; *Fucus constrictus* Harvey, Gen. So. Afr. Pl. 394. 1838, non *F. constrictus* Turner 1811).

Schmitzia nom. nov. *Bertholdia* Schmitz in Engler et Prantl, Nat. Pflanzenfam. 1(2): 526. 1897. Calosiphoniaceae (Rhodophyta). Non *Bertholdia* Lagerheim, Bot. Centralbl. 40: 380. 1889. Tetrasporaceae (Chlorophyta). Holotype species: **Schmitzia neapolitana** (Berth.) comb. nov. (*Calosiphonia neapolitana*

Berthold, Fauna u. Flora des Golfes von Neapel 12: 24. 1884). Other species: **Schmitzia japonica** (Okam.) comb. nov. (*Platoma japonica* Okamura, Icon. Jap. Alg. 5: 181. 1928).

Bertholdia Lagerheim was an illegitimate substitute for *Chaetopeltis* Berthold (1878), a name which Lagerheim considered unsuitable. *Bertholdia* Schmitz was first published in the same year (1889), but as a *nomen nudum* (Flora 72: 454). Lagerheim, assuming that his *Bertholdia* had priority, proposed the name *Schmitzia* as a substitute for *Bertholdia* Schmitz (Nuova Notarisia 1: 226. 1890). Klebahn, in agreement with Lagerheim concerning the unsuitability of the name *Chaetopeltis* but not believing that a change of Schmitz's name was warranted, proposed the name *Bertholdiella* as a substitute for both *Chaetopeltis* and *Bertholdia* Lagerheim (Jahrb. Wiss. Bot. 24: 277, adnot. 1892). Inasmuch as *Schmitzia* was proposed as a substitute for an invalid name (that is, *Bertholdia* Schmitz had not yet been validly published), it cannot be considered validly published as of 1890. Moreover, it apparently has not been accepted (i.e., validated) by any author subsequent to valid publication of *Bertholdia* Schmitz.

The following later generic homonym is not proposed for conservation primarily because a substitute name is available.

Chlorangiella DeToni, Syll. Alg. 1: 557. 1889. *Chlorangium* Stein, Org. Infusionsthiere 3(1): pl. 19, figs. 1-7. 1878. Chlorangiaceae (Chlorophyta). Non *Chlorangium* Link, Bot. Ztg. 7: 731. 1849. Lecanoraceae (Lichenes). Holotype species: **Chlorangiella pygmaea** (Ehrenb.) comb. nov. (*Stentor? pygmaeus* Ehrenberg, Abh. K. Akad. Wiss. Berlin, Phys. Kl. 1831: 100. 1832) = *Chlorangium stentorinum* (Ehrenb.) Stein (*Colacium stentorinum* Ehrenberg, Abh. K. Akad. Wiss. Berlin, Phys. Kl. 1833: 289. 1834). Other species: **Chlorangiella basiannulata** (Skuja) comb. nov. (*Chlorangium basiannulatum* Skuja, Acta Horti Bot. Univ. Latv. 11/12: 164. 1939). **Chlorangiella javanica** (Lemm.) comb. nov. (*Chlorangium javanicum* Lemmermann in Pascher, Süssw.-Fl. 5: 27. 1915). **Chlorangiella polychlora** (Skuja) comb. nov. (*Chlorangium polychlorum* Skuja, Symb. Bot. Upsal. 9(3): 108. 1948).

In 1832 Ehrenberg confused under the name *Stentor? pygmaeus* two species which he later (1834) separated as *Colacium vesiculosum* and *C. stentorinum*. By placing *Stentor? pygmaeus* in the synonymy of *C. stentorinum*, he thus typified it, and accordingly the correct name for this species, upon which Stein based the genus *Chlorangium*, is *Chlorangiella pygmaea* (Ehrenb.) comb. nov.

Additional considerations leading to the decision not to propose *Chlorangium* Stein for conservation include the facts that the earlier homonym is legitimate and that the genus is small. On the other hand, proponents of conservation could point out that the genus is widespread and well known, that DeToni's substitute name was not adopted by other workers, and that the earlier homonym is usually placed in the synonymy of *Lecanora* Acharius (1810) by lichenologists.

XI. *Illegitimate specific epithets.*

Montagne (Prodr. Phyc. Antarct. 12. 1842), when establishing *Xiphophora* (Fucaceae, Phaeophyta) for *Fucus gladiatus* Labillardière (Nov. Holl. Pl. Spec. 2: 111. 1806), illegitimately changed the specific epithet to *billardierii*. The correct name for this species is **Xiphophora gladiata** (Labill.) comb. nov.

Ceramium acanthonotum (Ceramiaceae, Rhodophyta), common on British coasts, was first described as *C. ciliatum β acanthonotum* Carmichael (in Hooker, Brit. Fl. 2(1): 336. 1833). It was raised to specific rank by J. Agardh (Adversaria 26. 1844), but meanwhile it was described by Kützing (Linnaea 15: 739. 1841) as *Acanthoceras shuttleworthianum*, so that the correct name is **Ceramium shuttleworthianum** (Kuetz.) comb. nov.

SERIANTHES DILMYI NOMEN NOVUM

F. R. Fosberg (Falls Church, Va.)

The provision of the International Code of Botanical Nomenclature which requires the rejection of names that were nomenclaturally superfluous when published (Art. 64-1) is a two-edged sword, often making it possible to avoid unfortunate name changes (e.g. the case of *Citrullus vulgaris* Schrader vs. *C. anguria* (Duch.) Hara, Taxon 2: 99-100; 134-135; 3: 2; 4: 198; 5: 15), but sometimes, also, bringing about changes that are inconvenient. This would probably be found to be true of almost any provision in the Code, if examined carefully, and of any future provision that might be added, because we are dealing with an almost infinite diversity of situations, a fact often overlooked when the Code is criticized and demands are made for its alteration.

A question as to the way this provision (Art. 64-1) is to be applied has arisen concerning a proposed name change in an as yet unpublished manuscript of mine on *Serianthes* (Leguminosae-Mimosoideae). Although this provision of the Code seems to me perfectly clearly worded, the fact that one my colleagues interprets it very differently makes it desirable to isolate the case in question and to discuss it in a more prominent place than a generic revision where it might be unnoticed by most of those interested in nomenclatural matters. It is presented here in the hope that, if there is a substantial body of difference of opinion as to my conclusion, a better wording of the Article may be proposed. I am personally satisfied with the present wording. The case is as follows:

The common widespread Malaysian species of *Serianthes*, the first proposed in the genus and its type, has long been known as *Serianthes grandiflora* Bentham. The name was based on *Inga grandiflora* Wallich, a *nomen nudum*, applied to Wallich's specimen no. 5285 in his Catalog. The validly published name, *Serianthes grandiflora* Benth. dates only from 1844, when Bentham proposed it. There seems no doubt that the Wallich specimen must be regarded as type of this name.

Unfortunately, Bentham also included within his circumscription of this species at the time of its publication a Tahitian plant, to which the name *Acacia myriadenia* Bertero ex Guillemin had been applied earlier. Bentham cited this in the synonymy of his species, and, since it was available at the time, should have adopted its epithet, *myriadenia* rather than the invalid *grandiflora*. Thus *Serianthes grandiflora* Benth. was, at the time of its publication, clearly superfluous in the meaning of Art. 64-1. Later, however, it was recognized that the Tahitian plant represented a different, though closely related species, and it was removed as *Serianthes myriadenia* (Bert. ex Guill.) Planch. To me this fact has no bearing on the illegitimacy of *S. grandiflora*, as there is no doubt that *Acacia myriadenia* was definitely within the *circumscription* of *S. grandiflora* when the latter was published. Subsequent dismemberment of the species and change of circumscription can have no effect on this. Therefore, there is no choice but to consider *S. grandiflora* superfluous when published and hence illegitimate.

My critic, however, insists that since the type is clearly the Wallich specimen, the inclusion of *Acacia myriadenia* makes no difference. This, to me, indicates confusion of typification with circumscription. Circumscription is determined by description, citation of specimens, and citation of earlier names, bringing with them their types. Typification is determined by a single specimen. Art. 64-1 definitely says "circumscription".

Therefore, *Serianthes grandiflora* is illegitimate and unavailable for the species in question, typified by *Wallich 5285* (Kew). Since there seems to be no other name available, I propose to rename it in honor of Mr. Anwari Dilmy, the first Dayak botanist, now keeper of the Bogor Herbarium. The pertinent synonymy is as follows:

Serianthes dilmyi Fosb., nom. nov.

Serianthes grandiflora Benth. in Hook. Lond. Jour. Bot. 3: 225, 1844 (excl. syn. *Acacia myriadenia* Bert. ex Guill. nom. illegit.).

SOME REMARKS ON MESCHINELLI'S FUNGUS-NAMES

Lennart Holm (Uppsala)

I.

The 10th volume of Saccardo's Sylloge Fungorum (1892) ends with a chapter on "Fungi fossiles" compiled by the Italian palaeobotanist Aloysio Meschinelli. It is a useful survey of all fossil fungi known at that time, including also several nomina nuda. Following the principle that fossil fungi should not be referred to genera of recent fungi when their true taxonomic position is uncertain, Meschinelli himself creates a lot of new generic names in this work. The often very superficial knowledge of fossil material does not justify its placing into living genera. He erects a number of form-genera of the type *Polyporites, Pezizites* etc., a custom already long used for fossil plants of doubtful position. "His de causibus omnibus nominibus, quibus fungorum genera exprimuntur, desinentiam *ites* adjungendam censui, ut clarius ab adhuc vigentibus distinguerentur, quibus quamvis intimis conjungantur rationibus, tamen absolute aequari nequeunt." (Op. cit., p. 743).

Unfortunately, many of these names are published in such a queer way that their nomenclatural status seems very doubtful. Let us take for example the first generic name in Meschinelli's list, viz. *Agaricites.* It is published in the following manner:

AGARICITES L. (*Agaricus*) sensu latissimo.

There is no generic diagnosis but only a description of the sole species, *A. Wardianus,* originally described in 1891 by Meschinelli himself as *Agaricus Wardianus.*

I have discussed this case with several distinguished colleagues. Three different opinions have been advanced:

(1) *Agaricites* is a *nomen nudum,* as a generic diagnosis has not been given. The genus is monotypic, but Art. 41 is not applicable as *Agaricites Wardianus* is not a new species.

(2) *Agaricites* is an extension of *Agaricus* L., including also those fossil fungi which resemble *Agaricus.* In this case *Agaricites* would probably have to be considered illegitimate as being a later synonym of *Agaricus* based on the same type. The said interpretation is certainly not reconcilable with the opinion of Meschinelli quoted above, but may be supported by his curious reference to Linnaeus as the author of *Agaricites* and his statement "sensu latissimo". It is moreover strengthened by some peculiarities in his text. Although Meschinelli in principle avoids referring fossil fungi to living genera, he nevertheless includes in his fossil genera some species considered identical with recent ones. For instance, *Polyporus mollis* Fr. and *P. vaporarius* Fr. reported by Conwentz from amber wood of Tertiary age are listed by Meschinelli as "*Polyporites mollis* Fr." and "*Polyporites vaporarius* Fr." respectively.

(3) It has been argued that the name *Agaricites* implies a description, "a fossil fungus resembling *Agaricus*", and that this would be sufficient for valid publication. An unprecedentedly meager description no doubt, but there are unfortunately no minimum requirements stipulated in the present rules as to the contents of a description that must be fulfilled in order to make it valid. It seems, however, that this third interpretation would have most fatal consequences if extended to nomina nuda in general.

Indeed, Meschinelli's method of proceeding seems so inconsistent and curious that it is hardly covered by the present rules. For my own part, I am decidedly of the opinion set forth under alternative (1), and accordingly regard most of Meschinelli's generic names as not validly published. I have been confronted with these problems when working on the nomenclature of fossil fungi for the INDEX NOMINUM GENERICORUM. According to the above, I consider the following generic names to be *nomina nuda* and propose that they are omitted from the INDEX.

Achlyites Mesch., Fung. Foss. Iconogr. 10. 1898.

Agaricites Mesch. in Sacc., Syll. Fung. 10: 745. 1892.

Botrytites Mesch. in Sacc., Syll. Fung. 10: 789. 1892.

Cenangites Mesch. in Sacc., Syll. Fung. 10: 775. 1892.

Daedaleites Mesch. in Sacc., Syll. Fung. 10: 747. 1892.

Depazites Mesch. in Sacc., Syll. Fung. 10: 785. 1892.

Dothidites Mesch. in Sacc., Syll. Fung. 10: 771. 1892.
Erysiphites Mesch. Fung. Foss. Iconogr. 15. 1898.
Eurotites Mesch. in Sacc., Syll. Fung. 10: 750. 1892.
Fusidites Mesch., Fung. Foss. Iconogr. 78. 1898.
Hydnites Mesch. in Sacc., Syll. Fung. 10: 748. 1892.
Lenzitites Mesch. in Sacc., Syll. Fung. 10: 745. 1892.
Mucorites Mesch., Fung. Foss. Iconogr. 9. 1898.
Oidites Mesch. in Sacc., Syll. Fung. 10: 789. 1892.
Penicillites Mesch. in Sacc., Syll. Fung. 10: 789. 1892.
Pezizites Mesch. in Sacc., Syll. Fung. 10: 775. 1892.
Phacidites Mesch. in Sacc., Syll. Fung. 10: 776. 1892.
Rhytismites Mesch. in Sacc., Syll. Fung. 10: 780. 1892.
Rosellinites Mesch. in Sacc., Syll. Fung. 10: 750. 1892.
Spilosphaerites Mass. in Mass. et Scarabelli, Studii Fl. Foss. Senigall. 86. 1859.
Stegites Mesch. in Sacc., Syll. Fung. 10: 779. 1892.
Streptotrichites Mesch. in Sacc., Syll. Fung. 10: 790. 1892.
Trametites Mesch. in Sacc., Syll. Fung. 10: 747. 1892.
Trematosphaerites Mesch. in Sacc., Syll. Fung. 10: 751. 1892.

II.

As fas as I am aware, the genus *Phacidites* Mesch. has not been typified. Andrews (in U.S. Geol. Surv. Bull. 1013, p. 208. 1955) refers to a "representative species", viz. "*Phacidites sinuosus* (Ludwig) Mesch.", but this proposal is based on *Phacidites* Mesch. 1892, according to the above a nomen nudum. However, the name was validly published by Meschinelli in Meschinelli et Squinabol, Flora Tertiaria Italica, p. 2 (1893) and two species were referred to it:

1. *P. coronatus* (Fr.) Mesch. (= *Phacidium coronatum* Fr.).

2. *P. Populi* (Bleicher et Fliche) Mesch. (= *Phacidium Populi* Bleicher et Fliche).

The former species is now well known as *Coccomyces coronatus* (Fr.) De Not. and regarded as the type of the genus *Coccomyces* De Not. 1847, which was founded on *Hysterium tumidum* Fr., a taxonomical synonym of *C. coronatus*. If typified on *Phacidium coronatum*, *Phacidites* would be a later synonym of *Coccomyces* De Not. As it thus seems advisable to select the other possible species, I propose to typify *Phacidites* Meschinelli in Meschinelli et Squinabol (1893) by *Phacidium Populi* Bleicher et Fliche in Bull. Soc. Sci. Nancy, Sér. 2, Tome 8, Fasc. 20, p. 11 (1887).

"LEOPOLDIA HERB. 1821" INVALIDLY PUBLISHED

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It has been pointed out (Traub & Moldenke, 1949, pp. 62-64) that in all nomenclatural history there is probably no other instance that serves as such an object lesson to the taxonomist as Herbert's treatment, from 1819 to 1821, of *Amaryllis reticulata* and *A. striatifolia*. During these years Herbert had an incomplete knowledge of these plants, and his ideas about relationships within the *Amaryllidaceae* were naturally in a constant state of flux as they should have been in the formative stages of his concepts of generic limits within the family. No one can object to this natural process in creative research. The obvious mistake that Herbert did make was to "think out loud" or "in print" as it were, and to attach names to imaginary (non-real) provisional "generic" entities that had no material counterpart in nature.

HERBERT'S VERY BRIEF STATEMENTS

The status of the proposed name in question must finally be decided on the basis of Herbert's very brief *published* statements as required by the Code. These have been assembled; the words in brackets [ ] are the writer's.

["Leopoldia Herb. 1821" not validly published]

[*Two wrong guesses*: (1) statement by

Herbert, Bot. Mag. Lond. 47: sub pl. 2113, p. 5. 1819]: "If *reticulata* be really native to Brasil, and not introduced .... from the coast of Africa, I conjure that it will be found to form by itself a genus distinguishable from *Coburgia* [Herb. 1819] by a complete union of the laciniae of the tube, and non-alternating filaments; in which case I would separate it from *Coburgia* [Herb. 1819] under the name, *Leopoldia reticulata* ..."

[Thinking in print, he presents a clear case of an invalidly published provisional name (see Art. 33-2) because it involves a conditional statement.]

[(2) statement by Herbert: Bot. Mag. Lond. 47: sub pl. 2124. 1820]: "*Reticulata* may decidedly rank as *Coburgia* (Herb. 1819)."

[Again, thinking in print and not knowing his facts, he distinctly retracts his incorrect statement of 1819 because he says that it now belongs in *Coburgia* Herb. 1819, the Cape Belladonna, a totally different genus, which is totally wrong on biological grounds, and thus has no bearing on the present case.]

[*Third wrong guess*: (3) statement by Herbert: Trans. Hort. Lond. 4: 176-184. "Jan. to 29, Feb. 1821"]: "*Leopoldia reticulata* and *striatifolia* — (*Amaryllis reticulata*. Bot. Mag. 657. And var. *striatifolia*. Bot. Mag. 2113, and Bot. Reg. 352. *Leopoldia reticulata*. Bot. Mag. 2113, p. 5) — which are two distinct species of a separate genus, approaching to *Coburgia* (Herb. 1819) in seed, and to *Amaryllis* (L. 1753, type, American Belladonna) in flower require the stove .... [The part in parentheses appeared as a footnote to the part immediately preceding.]

[Here, Herbert gave an *intirely different* imaginative "diagnosis" that has no counterpart in nature, and it thus excludes the species enumerated *as will be shown below.*]

APPLICATION OF THE CODE

Code provisions. Under Art. 41 of the Code (Lanjouw (ed.) 1956), as a special case, a *monotypic new* genus based on a new species, may be validly published by a combined generic and specific description or by citing an illustration with analysis (before 1908) showing essential characters. This does not apply here because "two distinct species", not new, were definitely included on a nomenclatural basis in the proposed "Leopoldia Herb. 1821."

Thus only Art. 39 applies to this proposal. Under the Code, a name of a taxon has no status unless it is validly published (Art. 12). According to Art. 39, the proposed generic name is not validly published unless it is accompanied (1) by a description of the genus, (2) by a citation of a previously and effectively published description of the genus, or (3) by reference to a previously published subdivision of a genus *). Herbert's incorrect guess — "approaching to *Coburgia* (Herb. 1821) in seed and to *Amaryllis* (L. 1753) in flower" — had not been previously published; thus only Art. 39-1 applies. Herbert *must give a correct diagnosis of the proposed genus.*

Diagnosis must be true to nature. The Code phrase, "a description of the genus" means just what it says, and does not cover concepts that are based on incorrect guesses that are outside the realm of science. Sealy (1939) in accordance with the Code is correct in insisting, in the same paper in which he proposed 1208 "Hippeastrum vs. Leopoldia", that the species included in *Amaryllis* L., as typified by Herbert in 1819, must be covered by the diagnosis — all must have a tepaltube. He is wrong in his facts since the included *Amaryllis formosissima*, contrary to his assertion, *does have a short tepaltube* (see Traub, 1941; 1958, pp. 244-246) and contrary to his conclusion, the typification, being the first, is validly published and must stand. However, he is wholly right in principle — the species included must be covered by the diagnosis — the diagnosis must not exclude the species enumerated. Surely, the Code applies equally in the two cases, and surely a stricter Code standard is not to be applied in the one case, and a looser Code-forbidden procedure in connection with "Leopoldia Herb. 1821," in the same paper.

It is conceded that in applying the Code provisions, *reasonable* latitude must be allowed for differences in quantity, such as size, etc., but there can be no compromise on real differences in quality or kind as Sealy (1939) has ably stated in principle — either there is a tepaltube or there is none. In the present case, either the seeds in question "*approach to those of Coburgia Herb. 1819*", or they do not do so. The Code must be impartially applied in both cases.

Diagnosis excludes species named. Herbert based his proposed "Leopoldia Herb. 1821" *solely on the basis of the seed character*

*) See Chapt. III, Sect. 4, footnote.

which he had not seen. This diagnosis cannot be changed by any later worker, including the Committee on Spermatophyta, as of the 1821 date indicated, because it is a matter of scientific fact (Rickett, 1958). It is either correct *as to kind* or incorrect in this respect. If correct, the proposed name is validly published; if incorrect, it is invalidly published. The data in Table 1 bear directly on this subject.

TABLE 1. TOTAL DIFFERENCE IN SEED CHARACTER

Amaryllis reticulata	*Coburgia* Herb. 1819, Cape Belladonna
Seeds relatively small, *round, hard* (not easily crushable due to relatively low moisture content), black; very slight, if any shrinkage on drying because moisture content is relatively low.	Seeds much larger, *angular, fleshy* (easily crushable due to relatively very high moisture content), whitish, becoming purplish on exposure to the sun; subject to extremely great shrinkage on drying due to loss of the high moisture content.

After two previous incorrect guesses, Herbert in 1821 reverted to the name, "Leopoldia", but this time he changed the diagnostic phrase to read: "approaching to *Coburgia* [Herb. 1819] in seed and to *Amaryllis* [L. 1753] in flower". This is supposed to mean that it represents a sort of connecting link between the two taxons. This is not true because *Amaryllis reticulata* and *A. striatifolia* are nothing of the kind. These two species have round, *hard, not* easily crushable, black seeds as shown in Table 1, and represent an evolutionary line within the genus *Amaryllis* L. —+ reduction in number of seeds per locule resulting in small, hard, round seeds as contrasted with numerous wafer-like seeds due to pressure in most other *Amaryllis* species. Belonging to a genus with a hollow scape, they are not closely related to *Coburgia* Herb. 1819, the Cape Belladonna, with a solid scape and with seeds that are *large, angular, fleshy, easily* crushable, whitish. There is a total difference of kind between the two types of seeds. But Herbert says that the seeds of *Amaryllis reticulata,* the proposed type of "Leopoldia Herb. 1821", are similar to those of *Coburgia* Herb. 1819, which is a total reversal of the facts. Thus "Leopoldia Herb. 1819" is not validly published under the Code in harmony with the Code principle as applied by Sealy (1939) to the typification of *Amaryllis* L. by Herbert in 1819.

Thus it is clear that Herbert was guessing and changed his mind at least three times between 1819 and 1821 as shown by his statements, and he finally guessed wrong. Had be waited until after February 1821, when he apparently finally saw the seeds of *Amaryllis reticulata,* all of this unnecessary work in tracing down his errors could have been avoided.

A little later, after February 1821 (Append. Bot. Reg. Lond. 14: 34. 1821; Bot. Mag. Lond. 51: 2475, p. 2. 1824) he admitted his errors when he stated "seeds round, smooth, blackish" for *Amaryllis reticulata* which he now reduced to "Coburgia Herb. 1821, *non Herb. 1819*", and thus gave up his invalidly published name, "Leopoldia Herb. 1821" without validating it (see Traub & Moldenke, 1949, pp. 63-64; Traub, 1958, pp. 244-246).

CONSERVATION UNNECESSARY

It is customary to reject automatically proposals that are unnecessary (see Taxon 2: 29. 1953) otherwise the machinery could be used for an end not authorized by the Code which is solely to conserve a later validly published name against another validly published earlier name or names.

It has been shown that the name "Leopoldia Herb. 1821" was not validly published in Jan.-Feb. 1821 as alledged, and it could have been validated with priority rights as claimed by Sealy (1939) only by the publication of a correct generic diagnosis in connection with it before Hippeastrum Herb. 1821 was published. This was not done, and thus conservation is now unnecessary.

The name was still available when the Italian botanist, Parlatore, validly published the genus *Leopoldia* Parl. (1845) (Liliac.), which is the first valid publication of the name under the Code (Art. 32). *Leopoldia* J. M. Roem. (1847) is validly published but is a later homonym.

We are now faced with the fact that "Leopoldia Herb. 1821" is in the same category as 1050 *Nothoscordum* in which case the Committee for Spermatophyta states "that no formal action is needed to declare that

conservation of a given name is unnecessary. It is a matter of fact, not of expediency." The Committee (Rickett, 1958) has recommended that Hippeastrum Herb. 1821 be conserved against the invalidly published "Leopoldia Herb. 1821". In the same paper, the unnecessarily conserved *Nothoscordum* is deconserved. In view of the fact it has been proved that "Leopoldia Herb. 1821" has been invalidly published, there will be another case for deconservation since the scientific facts are clear as applied to the Code, and they will finally prevail as in the case of *Nothoscordum*. Why not face the issue squarely now and keep the record straight.

Pictorial proofs. A little later, the writer will present illustrations of the seeds of *Amaryllis reticulata* and *Coburgia* Herb. 1819 (= *Brunsvigia rosea* (Lam.) Hann., the Cape Belladonna) to supplement the written proofs, and thus any remaining doubt should be finally removed.

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POSTSCRIPT

It should be noted that "Leopoldia Herb. 1819" is vulnerable from yet another standpoint because Herbert in 1821 did not actually give the name of the "genus Leopoldia" (the name being inserted by another person later without correcting the wrong diagnosis). Herbert merely says, — "*Leopoldia reticulata* and *straitifolia* (literature citations to previous names) are two species of a separate genus" (not actually named *as a genus*). We are to assume that it is "Leopoldia" from a species designation? This appears too lax for scientific precision. If allowed, one could *today* propose a genus *without directly naming it* — "Blankia blankii (literature reference to a previous name) is a species of a separate genus approaching to Coburgia *in seed* and to Amaryllis in flower", granted that the "*in seed*" diagnosis is correct in the "Blankia" example. Thus some one besides the author of the "genus" would have to supply the supposed generic name, "Blankia", *as a genus*. This would greatly reduce the work in proposing genera but would lead surely to deplorable consequences.

Apparently the requirement that the generic name should at least be mentioned *as a genus* is very elementary and is covered by the Code phrase "a name of a genus" (= named as a genus) in Code Chapter IV. Sect. 2, Art. 39, on valid publication: — "In order to be validly published, a name of a genus of recent plants ..." The possibility of anyone being so very careless in proposing a generic name without actually naming it *as a genus* was apparently thought so unlikely that the general statement in the opening line of Art. 39 was considered sufficiently clear. It now appears that the matter should be clarified. To make this sufficiently clear, it is proposed that the first line of Art. 39 be changed to read: "In order to be validly published, a name of a genus of recent plants must be directly named as a genus and ..."

NEW COMBINATIONS IN MOSSES II[1])

R. van der Wijk et W. D. Margadant (Groningen)

In this second alphabetical list are given the new combinations that were necessary in the moss genera beginning with the letters B and C. They are published in connection with the first volume of the Index Muscorum[2]) which is now in print and which will appear in the second half of 1959.

[1]) "I" in Taxon 7: 287. 1958.

[2]) The Index Muscorum is aided by grants from the Netherlands Organisation of Pure Scientific Research (Z.W.O.) in the Hague and by the National Science Foundation in Washington.

Anacamptodon fortunei Mitt. var. *urceolatus* (Dix.) Wijk et Marg.

Basionym: *Ectropodon urceolatus* Dix., J. Bot. 74: 6. 1936.

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Basionym: *Hypnum pyrrophyllum* C. Muell., Syn. 2: 344. 1851.

Atrichum angustatum (Brid.) B.S.G. var. *conterminum* (Card.) Wijk et Marg.

Basionym: *Atrichum conterminum* Card., Rev. Bryol. 37: 5. 1910.

Bartramia capensis (R. Brown) Wijk et Marg.

Basionym: *Glyphocarpa capensis* R. Brown, Act. Soc. Linn. London 12: 575. 1819.

Brachymenium apiculatum (P. Beauv.) Wijk et Marg.

Basionym: *Mnium apiculatum* P. Beauv., Prodr. 73. 1805.

Bryoerythrophyllum binnsii (R. Brown ter.) Wijk et Marg.

Basionym: *Trichostomum binnsii* R. Brown ter., Trans. New Zealand Inst. 29: 486. *43 f. 10.* 1897.

Bryum acutiforme Limpr. ssp. *axel-blyttii* (Philib.) Wijk et Marg.

Basionym: *Bryum axel-blyttii* Philib., Rev. Bryol. 16: 61. 1889.

Bryum angustirete Kindb. var. *ardonense* (Breidl.) Wijk et Marg.

Basionym: *Bryum ardonense* Breidl., Oesterr. Bot. Zeitschr. 39: 135. 1889.

Bryum angustirete Kindb. ssp. *ateles* (Amann) Wijk et Marg.

Basionym: *Bryum ateles* Amann, Mem. Soc. Vaudoise Sc. Nat. 3: 38. 1928.

Bryum angustirete Kindb. var. *brotheri* (Bomanss.) Wijk et Marg.

Basionym: *Bryum brotheri* Bomanss., Rev. Bryol. 30: 86. 1903.

Bryum angustirete Kindb. var. *camurum* (Hag.) Wijk et Marg.

Basionym: *Bryum camurum* Hag., K. Norsk. Vid. Selsk. Skrift. 1908(1): 16. 1908.

Bryum angustirete Kindb. var. *compactum* (Hornsch.) Wijk et Marg.

Basionym: *Ptychostomum compactum* Hornsch., Flora 5 (Syll. 1): 62. 1822.

Bryum angustirete Kindb. var. *confluens* (Joerg.) Wijk et Marg.

Basionym: *Bryum confluens* Joerg., Foerh. Vid. Selsk. Christiania 1894(8): 161. 1894.

Bryum angustirete Kindb. ssp. *fridtzii* (Hag.) Wijk et Marg.

Basionym: *Bryum fridtzii* Hag., Tromsoe Mus. Aarsh. 21-22(2): 217. 1901.

Bryum angustirete Kindb. var. *jamanense* (Amann) Wijk et Marg.

Basionym: *Bryum pendulum* (Hornsch.) Schimp. ssp. *jamanense* Amann, Fl. Mouss. Suisse 1: 119. 1919.

Bryum angustirete Kindb. var. *mikutowiczii* (Podp.) Wijk et Marg.

Basionym: *Bryum pendulum* (Hornsch.) Schimp. var. *mikutowiczii* Podp., Consp. 413. 1954. [Bryum mikutowiczii Warnst., Hedwigia 54: 38. 1914 *nom. inval. prov.*].

Bryum angustirete Kindb. ssp. *parvulum* (Kindb.) Wijk et Marg.

Basionym: *Bryum pendulum* (Hornsch.) Schimp. ssp. *parvulum* Kindb., Rev. Bryol. 34: 92. 1907.

Bryum angustirete Kindb. var. *ruppinense* (Warnst.) Wijk et Marg.

Basionym: *Bryum ruppinense* Warnst., Verh. Bot. Ver. Brandenburg 35: 129. 1894.

Bryum angustirete Kindb. var. *spadiceum* (Brid.) Wijk et Marg.

Basionym: *Ptychostomum compactum* Hornsch. var. *spadiceum* Brid., Bryol. Univ. 1: 837. 1827.

Bryum angustirete Kindb. ssp. *stygium* (Amann) Wijk et Marg.

Basionym: *Bryum stygium* Amann, Mem. Soc. Vaudoise Sc. Nat. 3: 39. 1928.

Bryum atrovirens Brid. var. *bomanssonii* (Lindb.) Wijk et Marg.

Basionym: *Bryum bomanssonii* Lindb., Bot. Not. 1884: 67. 1884.

Bryum atrovirens Brid. ssp. *bornholmense* (Winkelm. et Ruth.) Wijk et Marg.

Basionym: *Bryum bornholmense* Winkelm. et Ruth., Hedwigia 38 (Beibl.): 120. 1899.

Bryum atrovirens Brid. var. *clavatulum* (Card. et Dix.) Wijk et Marg.

Basionym: *Bryum clavatulum* Card. et Dix., J. Bot. 47: 373. 1909.

Bryum atrovirens Brid. var. *ingridae* (Podp.) Wijk et Marg.

Basionym: *Bryum erythrocarpum* Schwaegr. ssp. *ingridae* Podp., Nyt Mag. Naturvid. 80: 11. *1-2.* 1939.

Bryum atrovirens Brid. var. *latifrons* (Podp.) Wijk et Marg.

Basionym: *Bryum erythrocarpum* Schwaegr. var. *latifrons* Podp., Act. Ac. Sc. Cech. Bas. Brun. 27: 144. *3, s-u.* 1955.

Bryum atrovirens Brid. var. *marginatum* (Roth) Wijk et Marg.

Basionym: *Bryum erythrocarpum* Schwaegr. var. *marginatum* Roth, Eur. Laubm. 2: 139. 1905.

Bryum atrovirens Brid. var. *minii* (Podp.) Wijk et Marg.
Basionym: *Bryum minii* Podp. in Giac., Nuov. Giorn. Bot. Ital. 45: 569. 1939.

Bryum atrovirens Brid. var. *pachydermum* (Bomanss.) Wijk et Marg.
Basionym: *Bryum pachydermum* Bomanss., Rev. Bryol. 33: 60. 1906.

Bryum atrovirens Brid. var. *pseudomarginatum* (Amann) Wijk et Marg.
Basionym: *Bryum murale* (Schimp.) Wils. var. *pseudomarginatum* Amann, Fl. Mouss. Suisse 2: 238. 1919.

Bryum atrovirens Brid. var. *radiculosum* (Brid.) Wijk et Marg.
Basionym: *Bryum radiculosum* Brid., Spec. Musc. 3: 18. 1817.

Bryum bryoides (R. Brown) Wijk et Marg.
Basionym: *Pohlia bryoides* R. Brown, Suppl. App. Capt. Parry's Voyage 196. 1823.

Bryum creberrimum Tayl. var. *obtusiusculum* (Lindb. et Arn.) Wijk et Marg.
Basionym: *Bryum affine* Lindb. et Arn. var. *obtusiusculum* Lindb. et Arn., K. Svensk. Vet. Ak. Handl. 23(10): 40. 1890.

Bryum densifolium Brid. var. *decumbens* (C. Muell.) Wijk et Marg.
Basionym: *Bryum gracilescens* C. Muell. var. *decumbens* C. Muell., Syn. 1: 261. 1848.

Bryum densifolium Brid. var. *duplicatum* (Ren. et Card.) Wijk et Marg.
Basionym: *Bryum gracilescens* C. Muell. var. *duplicatum* Ren. et Card., Bull. Soc. R. Bot. Belg. 34(2): 62. 1896.

Bryum knowltonii Barnes var. *ammophilum* (Ruth.) Wijk et Marg.
Basionym: *Bryum ammophilum* Ruth, Hedwigia 36: 384. 1897.

Bryum knowltonii Barnes var. *plani-operculatum* (Warnst.) Wijk et Marg.
Basionym: *Bryum plani-operculatum* Warnst., Krypt. Fl. Brandenburg 2: 455. *471 f.* 3. 1905.

Bryum murorum (Schimp.) Berk. var. *gallicum* (Podp.) Wijk et Marg.
Basionym: *Bryum erythrocarpum* Schwaegr. var. *gallicum* Podp., Preslia 2: 86. 1923.

Bryum pseudotriquetrum (Hedw.) Schwaegr. var. *amoenum* (Warnst.) Wijk et Marg.
Basionym: *Bryum bimum* (Brid.) Turn. var. *amoenum* Warnst., Verh. Bot. Ver. Brandenburg 41: 60. 1899.

Bryum pseudotriquetrum (Hedw.) Schwaegr. var. *vestitum* (Broth.) Wijk et Marg.
Basionym: *Bryum ventricosum* Relh. var. *vestitum* Broth., Oefv. Finsk. Vet. Soc. Foerh. 62A(9): 19. 1921.

Bryum schleicheri Schwaegr. var. *brachyphyllum* (Amann) Wijk et Marg.
Basionym: *Bryum turbinatum* (Hedw.) Turn. var. *brachyphyllum* Amann, Fl. Mouss. Suisse 3: 85. 1933.

Bryum truncorum (Brid.) Brid. var. *nitidonigrum* (Ren.) Wijk et Marg.
Basionym: *Bryum nitido-nigrum* C. Muell. *ex* Ren., Prodr. Fl. Bryol. Madag. 168. 1898.

Calomnion schistostegiellum (Besch.) Wijk et Marg.
Basionym: *Nadeaudia schistostegiella* Besch., Rev. Bryol. 25: 11. 1898.

Calymperes tahitense (Sull.) Mitt. var. *denticulatum* (C. Muell.) Wijk et Marg.
Basionym: *Calymperes denticulatum* C. Muell., Bot. Jahrb. 5: 86. 1883.

Calymperes tahitense (Sull.) Mitt. var. *polytrichoides* (Fleisch.) Wijk et Marg.
Basionym: *Calymperes orientale* Mitt. var. *polytrichoides* Fleisch., Musci Fl. Buitenzorg 1: 249. 1904.

Calyptothecium Mitt. sect. *Pseudo-Calyptothecium* (Broth.) Wijk et Marg.
Basionym: *Pterobryopsis* Fleisch. sect. *Pseudo-Calyptothecium* Broth., Nat. Pfl. 1(3): 802. 1906.

Campylium krylovii (Podp.) Wijk et Marg.
Basionym: *Chrysohypnum krylovii* Podp., Publ. Fac. Sc. Univ. Masaryk Brno 116: 28. *19.* 1929.

Campylopus fragilis (Brid.) B.S.G. var. *alpicola* (C. Muell.) Wijk et Marg.
Basionym: *Dicranum alpicola* C. Muell., Bot. Zeit. 16: 161. 1858.

Campylopus fragilis (Brid.) B.S.G. var. *muelleri* (Jur.) Wijk et Marg.
Basionym: *Campylopus muelleri* Jur. in Rabenh., Bryoth. Eur. fasc. 12 n. 578. 1862.

Campylopus gibboso-alaris (Broth. et Par.) Wijk et Marg.
Basionym: *Pilopogon gibboso-alaris* Broth. et Par. Oefv. Finsk. Vet. Soc. Foerh. 53 (A, 11): 7. 1911.

Chaetomitrium tahitense (Sull.) Mitt. var. *deplanchei* (Dub.) Wijk et Marg.
Basionym: *Holoblepharum deplanchei* Dub. in Besch., Ann. Sc. Nat. Bot. ser. 5, 18: 227. 1873.

Chamberlainia acuminata (Hedw.) Grout ssp. *stenocarpa* (Kindb.) Wijk et Marg.

Basionym: *Camptothecium acuminatum* (Hedw.) Kindb. ssp. *stenocarpum* Kindb., Eur. N. Am. Bryin. 1: 89. 1897.

Cirriphyllum reichenbachianum (Hueb.) Wijk et Marg.

Basionym: *Hypnum reichenbachianum* Hueb., Flora 30: 657. *4.* 1847.

Cirriphyllum reichenbachianum (Hueb.) Wijk et Marg. var. *enervium* (Velen.) Wijk et Marg.

Basionym: *Eurhynchium velutinoides* B.S.G. var. *enervium* Velen., Rozpravy Cesk. Ak. Ved. Tr. 2, 9(28): 9. 1900.

Cirriphyllum tenuicaule (Spruc.) Wijk et Marg.

Basionym: *Hypnum tenuicaule* Spruc., Musci Pyren. n. 72. 1847.

Cirriphyllum tenuinerve (Lindb.) Wijk et Marg.

Basionym: *Hypnum tenuinerve* Lindb., Oefv. Svensk. Vet. Ak. Foerh. 20: 297. 1863.

Clastobryella pusilla (Thér.) Wijk et Marg.

Basionym: *Pterigynandrum pusillum* Thér., Recueil Publ. Soc. Havraise, Etud. Div. 1925: 147. 1926.

Cratoneuron commutatum (Hedw.) Roth var. *fluctuans* (B.S.G.) Wijk et Marg.

Basionym: *Hypnum commutatum* Hedw. var. *fluctuans* B.S.G. Bryol. Eur. 6: 115. *608γ*. 1854 (fasc. 57-61 Mon. 39. *26γ*).

Dendrocryphaea ramosissima (Par.) Wijk et Marg.

Basionym: *Cryphaea ramosissima* Par. in Jaeg., Ber. S. Gall. Naturw. Ges. 1874-75: 184. 1876 (Ad. 2: 100).

Desmatodon convolutus (Brid.) Grout var. *gasilienii* (Vent.) Wijk et Marg.

Basionym: *Desmatodon gasilienii* Vent., Rev. Bryol. 21: 75. 1894.

Desmatodon convolutus (Brid.) Grout var. *leucodontus* (Corb.) Wijk et Marg.

Basionym: *Barbula atrovirens* (Sm.) Schimp. var. *leucodonta* Corb., Mem. Soc. Sc. Nat. Cherbourg 26: 244. 1889.

Didymodon cordatus Jur. ssp. *austriacus* (Schiffn. et Baumg.) Wijk et Marg.

Basionym: *Didymodon austriacus* Schiffn. et Baumg., Oesterr. Bot. Zeitschr. 56: 156. 1906.

Didymodon spadiceus (Mitt.) Limpr. ssp. *poeninus* (Amann) Wijk et Marg.

Basionym: *Barbula poenina* Amann, Bull. Soc. Vaudoise Sc. Nat. 53: 87. *1-2.* 1920.

Ditrichum hookeri (C. Muell.) Hamp. var. *strictiusculum* (C. Muell.) Wijk et Marg.

Basionym: *Blindia leptotrichocarpa* C. Muell. var. *strictiuscula* C. Muell., Flora 68: 405. 1885.

Drepanocladus exannulatus (B.S.G.) Warnst. var. *acutus* (San.) Wijk et Marg.

Basionym: *Hypnum fluitans* Hedw. [var.] *acutum* San., Bih. K. Svensk. Vet. Ak. Handl. 10(1): 12. 1885.

Drepanocladus exannulatus (B.S.G.) Warnst. var. *alpinus* (Grav.) Wijk et Marg.

Basionym: *Hypnum exannulatum* B.S.G. var. *alpinum* Grav., Rev. Bryol. 10: 35. 1883.

Funaria obtusa (Hedw.) Lindb. var. *longifolia* (Schimp.) Wijk et Marg.

Basionym: *Entosthodon ericetorum* (Bals. et De Not.) C. Muell. var. *longifolius* Schimp., Syn. 317. 1860 *cf.* Entosthodon obtusus (Hedw.) Lindb. var. longifolius (Schimp.) Podp., Consp. 308. 1954.

Hygrohypnum luridum (Hedw.) Jenn. ssp. *pseudomontanum* (Kindb.) Wijk et Marg.

Basionym: *Hypnum pseudomontanum* Kindb. in Macoun, Cat. Canad. Pl. 6: 243. 1892.

Hygrohypnum smithii (Sw.) Broth. var. *goulardii* (Schimp.) Wijk et Marg.

Basionym: *Hypnum goulardii* Schimp., Syn. ed. 2: 778. 1876.

Leiomela aristifolia (Jaeg.) Wijk et Marg.

Basionym: *Bartramia aristifolia* Jaeg., Ber. S. Gall. Naturw. Ges. 1873-74: 71. 1875 (Ad. 1: 233).

Leiomitrium scaberrimum (Broth.) Wijk et Marg.

Basionym: *Anomodon scaberrima* Broth., Bih. K. Svensk. Vet. Ak. Foerh. 21 Afd. 3(3): 65. 1895.

Leptodictyum riparium (Hedw.) Warnst. var. *cylindricum* (Buyss.) Wijk et Marg.

Basionym: *Amblystegium leptophyllum* Schimp. var. *cylindricum* Buyss., Essai Genr. Amblyst. 18. 1876.

Leskeella nervosa (Brid.) Loesk. var. *flagellifera* (Kindb.) Wijk et Marg.

Basionym: *Leskea nervosa* (Brid.) Myr. var. *flagellifera* Kindb., Ottawa Natural. 4: 63. 1890.

Leucobryum heterodictyon Besch. var. *microphyllum* (Card.) Wijk et Marg.

Basionym: *Cardotia heterodictya* (Besch.) Besch. var. *microphylla* Card. in Grand., Hist. Madag. 39: 152. 1915.

Mittenothamnium camptorhynchum (Hamp.) Wijk et Marg.
Basionym: *Hypnum camptorhynchum* Hamp., Vid. Medd. Naturh. For. Kjoebenh. ser. 3, 2: 288. 1870.

Mittenothamnium patens (Hamp.) Wijk et Marg.
Basionym: *Chrysohypnum patens* Hamp., Bot. Zeit. 28: 35. 1870.

Mittenothamnium simorhynchum (Hamp.) Wijk et Marg.
Basionym: *Hypnum simorhynchum* Hamp., Vid. Medd. Naturh. For. Kjoebenh. ser. 3, 2: 287. 1870.

Mniobryum ludwigii (Schwaegr.) Loesk. var. *latifolium* (Schimp.) Wijk et Marg.
Basionym: *Webera ludwigii* (Schwaegr.) Schimp. var. *latifolia* Schimp., Syn. ed. 2: 402. 1876.

Mniobryum wahlenbergii (Web. et Mohr) Jenn. var. *glaciale* (Brid.) Wijk et Marg.
Basionym: *Bryum glaciale* Brid., Bryol. Univ. 1: 852. 1827.

Mniodendron dendroides (Brid.) Wijk et Marg.
Basionym: *Bryum dendroides* Linn. f. ex Brid., Musc. Rec. 2(3): 120. 1803.

Mnium longirostre Brid. var. *coriaceum* (Griff.) Wijk et Marg.
Basionym: *Bryum coriaceum* Griff., Calcutta J. Nat. Hist. 3: 60. 1843.

Philonotis hastata (Dub.) Wijk et Marg.
Basionym: *Hypnum hastatum* Dub. in Moritz., Syst. Verzeichn. Zoll. Pfl. 132. 1846.

Pleurozium schreberi (Brid.) Mitt. var. *tananae* (Grout) Wijk et Marg.
Basionym: *Hypnum tananae* Grout in Holz. et Frye, Publ. Puget Sound Biol. Stat. 3: 58. 1921.

Pohlia bridelianum (C. Muell.) Wijk et Marg.
Basionym: *Bryum bridelianum* C. Muell., Syn. 1: 341. 1848.

Pohlia camptotrachela (Ren. et Card.) Broth. var. *bulbifera* (Lam. et Cand.) Wijk et Marg.
Basionym: *Bryum decipiens* Lam. et Cand. var. *bulbiferum* Lam. et Cand., Fl. Franc. ed. 2: 503. 1805.

Pohlia heribaudii (Ren. et Card.) Broth. var. *madagassa* (Ren. et Card.) Wijk et Marg.
Basionym: *Brachymenium heribaudii* Ren. et Card. var. *madagassum* Ren. et Card., Prodr. Fl. Bryol. Madag. Suppl. 54. 1909.

Pohlia korbiana (C. Muell.) Wijk et Marg.
Basionym: *Bryum korbianum* C. Muell., Flora 57: 484. 1874.

Pohlia minor Schwaegr. ssp. *acuminata* (Hopp. et Hornsch.) Wijk et Marg.
Basionym: *Pohlia acuminata* Hopp. et Hornsch., Flora 2(1): 94. 1819.

Pohlia minor Schwaegr. var. *arcuata* (Hopp. et Hornsch.) Wijk et Marg.
Basionym: *Pohlia arcuata* Hopp. et Hornsch., Flora 2(1): 98. 1819.

Pohlia minor Schwaegr. var. *brachycarpa* (Hopp. et Hornsch.) Wijk et Marg.
Basionym: *Pohlia brachycarpa* Hopp. et Hornsch., Flora 2(1): 96. 1819.

Pohlia minor Schwaegr. var. *gracilis* (Hopp. et Hornsch.) Wijk et Marg.
Basionym: *Pohlia gracilis* Hopp. et Hornsch., Flora 2(1): 100. 1819.

Pohlia minor Schwaegr. var. *polyseta* (Hopp. et Hornsch.) Wijk et Marg.
Basionym: *Pohlia polyseta* Hopp. et Hornsch., Flora 2(1): 99. 1819.

Pohlia minor Schwaegr. var. *pseudacuminata* (Kindb.) Wijk et Marg.
Basionym: *Bryum polymorphum* (Hopp. et Hornsch.) Hartm. ssp. *pseudoacuminatum* Kindb., Eur. N. Am. Bryin. 2: 390. 1897.

Pohlia minor Schwaegr. var. *stricta* (B.S.G.) Wijk et Marg.
Basionym: *Bryum polymorphum* (Hopp. et Hornsch.) Hartm. var. *strictum* B.S.G., Bryol. Eur. 4: 96. *344γ*. 1839 (fasc. 6-9 Mon. 26. *8γ*).

Pohlia minor Schwaegr. var. *tenella* (Hopp. et Hornsch.) Wijk et Marg.
Basionym: *Pohlia tenella* Hopp. et Hornsch., Flora 2(1): 95. 1819.

Ptychomitrium nigrescens (Kunz.) Wijk et Marg.
Basionym: *Macromitrium nigrescens* Kunz., Flora 13: 373. 1830.

Rhynchostegiella compacta (C. Muell.) Loesk. ssp. *americana* (Grout) Wijk et Marg.
Basionym: *Amblystegium americanum* Grout, Bryologist 13: 32. 1910 *cf.* Amblystegium compactum (C. Muell.) Aust. ssp. americanum (Grout) Grout, Moss Fl. N. Am. 3(2): 72. 1931.

Sematophyllum caespitosum (Hedw.) Mitt. ssp. *coelophyllum* (Besch.) Wijk et Marg.
Basionym: *Rhaphidostegium caespitosum* (Hedw.) Jaeg. ssp. *coelophyllum* Besch., Ann. Sc. Nat. Bot. ser. 6, 3: 247. 1876.

Sematophyllum nano-cephalum (C. Muell.) Broth. var. *subglauculum* (C. Muell.) Wijk et Marg.

Basionym: *Aptychus nano-cephalus* C. Muell. var. *subglauculus* C. Muell., Hedwigia 36: 121. 1897.

Semibarbula orientalis (F. Web.) Wijk et Marg.

Basionym: *Trichostomum orientale* F. Web., Arch. Syst. Naturg. 1(1): 129. *4 f. 6.* 1804.

Stereophyllum lepidopiloides (C. Muell.) Wijk et Marg.

Basionym: *Hypnum lepidopiloides* C. Muell., Linnaea 42: 450. 1879.

Streblotrichum croceum (Brid.) Loesk. var. *coreense* (Card.) Wijk et Marg.

Basionym: *Barbula paludosa* Web. et Mohr var. *coreensis* Card., Beih. Bot. Centralbl. 17: 8. 1904.

Symblepharis vaginata (Hook.) Wijk et Marg.

Basionym: *Didymodon vaginatus* Hook., Icon. Pl. *18 f. 4.* 1836.

Tortula Hedw. sect. *Crassinerves* (Mild.) Wijk et Marg.

Basionym: *Barbula* Hedw. sect. *Crassinerves* Mild., Bryol. Siles. 11. 1: 112. 1869.

Tortula intermedia (Brid.) De Not. var. *planifolia* (Fleisch. et Warnst.) Wijk et Marg.

Basionym: *Tortula montana* (Nees) Lindb. var. *planifolia* Fleisch. et Warnst., Bot. Centralbl. 65: 299. 1896.

Tortula laevipila (Brid.) Schwaegr. var. *meridionalis* (Schimp.) Wijk et Marg.

Basionym: *Barbula laevipila* (Brid.) Garov. var. *meridionalis* Schimp., Syn. 699. 1860.

Tortula pilifera Hook. var. *denticulata* (Dus.) Wijk et Marg.

Basionym: *Barbula flagellaris* Schimp. var. *denticulata* Dus., Ark. Bot. 6(8): 14. 1906.

Tortula pilifera Hook. var. *gracilis* (Dus.) Wijk et Marg.

Basionym: *Barbula flagellaris* Schimp. var. *gracilis* Dus., Ark. Bot. 6(8): 15. 1906.

Tortula pilifera Hook. var. *oliviensis* (Card.) Wijk et Marg.

Basionym: *Barbula oliviensis* Card., Bull. Herb. Boiss. ser. 2, 5: 1002. 1905.

Tortula subulata Hedw. var. *angustifolia* (Mild.) Wijk et Marg.

Basionym: *Barbula subulata* (Hedw.) P. Beauv. var. *angustifolia* Schimp. ex Mild., Bryol. Siles. 125. 1869.

NEWS AND NOTES

PLANT SPECIES DESCRIBED BY R. A. PHILIPPI DURING THE LAST CENTURY *)

To contribute to the celebration of the 3rd. South American Botanical Congress, it seems necessary to analize the phanerogamic plant species described by R. A. Philippi during the last century. A non critical study composed of more than 400 pages is presented, listing 3.609 species described for Chile, Argentina, Perú and Bolivia. The paper adds 2.003 species to the Catalogue of the Chilean Flora by F. Philippi published in 1881, cites the species with bibliographical references, type localities and the herbarium numbers from the National Museum of Natural History at Santiago, Chile, where the material is well preserved.

Worth mentioning is: a) the main part of the plant species described by the author, where not available in the Chilean Herbaria has been commented on by botanists, b) the critical studies of Reiche's Flora of Chile, reduced to synonymy, well characterized species, c) a good many papers on the taxonomy of Chilean Plants omited this author's plant species, although more than 3.000 new species and 97 new genera were described, and d) the duplicate of these collections was destroyed at the Berlin-Dahlem Museum during the last war.

The schematic chart here presented gives a good idea of what is now preserved, already mounted in the North American standard form and kept separated in the type herbarium at the National Museum of Natural History. The institution has 83,3% of the species described by the author, and it will

*) Paper presented at the 3rd. South American Botanical Congress held at Lima, Perú, on May 11-18th., 1958. According to the final Act and Resolutions, the Congress approved that this paper should be completely published, as soon as possible to be available to scientists and botanical institutions.

be necessary to search for the remaining 16,7% in different Argentinean and European herbaria. The paper gives a good opportunity to students and botanists for the remaining task.

The study analizes 99 families, 531 genera and 3.609 species of phanerogamic plants, a total of 605 species is still lacking. The number of specimens under study were more than 30.000, nevertheless from the 3.609 species described, only 605 are wanting. Of the ones that are available, that is to say a total of approximately 3.000 species, the institution has photographs to exchange at request.

The paper ends with an index of the type localities arranged geographically, giving an idea of the importance of each locality for the number of families, genera and species cited.

The study of the Philippi's species and those described by Gay and collaborators, Bertero, Lechler and Reiche, constitutes one of the best scientific patrimony the country has.

Carlos Muñoz *)

NEOPTYCHOCARPUS NOM. NOV.

Unter dem Namen *Ptychocarpus* wurde von Kuhlmann, Arch. Jard. Bot. Rio de Janeiro 4: 358. 1925, eine neue, zur Familie der *Flacourtiaceae* gehörige Gattung aus Brasilien (Pará) mit der einzigen Art *P. apodanthus* Kuhlm. beschrieben und gültig veröffentlicht. Monachino, Phytologia 2: 432. 1948, konnte nachweisen, daß die Gattung *Ptychocarpus* durch eine zweite Art in Peru vertreten ist; sie erhielt den Namen *P. killipii* Monachino. Im Index Nominum Genericorum set 6. 1958 schließlich wurde der Gattungsname *Ptychocarpus* unter der Kennziffer 33/05978 von Sleumer bearbeitet und als korrekt anerkannt.

Leider ist den drei genannten Autoren entgangen, daß der Name *Ptychocarpus* bereits von Ch. E. Weiss, Fossile Flora der jüngsten Steinkohlenformation und des Rothliegenden im Saar-Rhein-Gebiete 1: 94. 1869, für eine fossile Farnfruktifikationsgattung verwendet und unter Beifügung einer lateinischen Diagnose und einer Beschreibung in deutscher Sprache gültig veröffentlicht worden ist. Der Gattungsname *Ptychocarpus* Kuhlm. ist somit ein jüngeres Homonym und durch einen anderen Namen zu ersetzen. Ich schlage dafür *Neoptychocarpus* **) vor.

Dieses Beispiel zeigt erneut, wie wichtig für die Nomenklatur der rezenten Pflanzen die Erfassung der Namen der fossilen Gattungen ist.

Übrigens sei am Rande erwähnt, dass C. F. Reed, Taxon 4: 115. 1955 bei einer Zusammenstellung von Homonymen bei Farngattungen unter *Ptychocarpus* Weiss den Gattungsnamen *Ptychocarpa* (R. Br.) Spach, Hist. Nat. Veg. Phan. 10: 402. 1841 (*Proteaceae*) erwähnt. Dabei handelt es sich aber um kein echtes Homonym, sondern im Gegenteil, nach den Beispielen in Art. 75 Abs. 3 JCBN 1956 ("Beispiele für Namen, die wahrscheinlich nicht verwechselt werden", z.B. *Peponia* und *Peponium*, *Peltophorus* und *Peltophorum*) zu urteilen, um eine durchaus zulässige Namensgebung. Umgekehrt ist Reed bei seiner Publikation der Name *Ptychocarpus* Kuhlm. nicht bekannt gewesen.

Synonymie:

Neoptychocarpus Buchheim nom. gen. nov.

Ptychocarpus Kuhlm. Arch. Jard. Bot. Rio de Janeiro 4: 358. 1925 (gen. Flacourt.) *non* Ch. E. Weiss, Foss. Fl. Steink. form. Rothl. Saar-Rhein-Geb. 1: 94. 1869 (gen. foss. Filic.)

Typus generis: N. apodanthus (Kuhlm.) Buchheim = Ptychocarpus apodanthus Kuhlm.

Neoptychocarpus apodanthus (Kuhlm.) Buchheim comb. nov.

Basionym: *Ptychocarpus apodanthus* Kuhlm. Arch. Jard. Bot. Rio de Janeiro 4: 358. 1925.

Neoptychocarpus killipii (Monachino) Buchheim comb. nov.

Basionym: *Ptychocarpus killipii* Monachino, Phytologia 2: 432. 1948.

G. Buchheim (Berlin-Dahlem)

A. T. BEALS MOSS HERBARIUM

The New York Botanical Garden has just received the Alfred Tennyson Beals moss herbarium. Mr. Beals, who died at the age of 85 three years ago, was a well-known photographer by profession. His hobby was mosses. From 1925-31 Mr. Beals served as secretary of the Sullivan Moss Society, which later became the Bryological Society of America.

*) Delegate of The University of Chile, and The National Museum of Natural History; President of the Chilean Society of Botany and Professor of Agricultural Botany.

**) *νέος* = neu und Gattungsname Ptychocarpus, zusammengesetzt aus *πτύξ*, *πτυχός* = Falte, Furche und *καρπός* = Frucht (Name vom Autor nicht erklärt).

ATTI IST. BOT. PAVIA

The Botanical Institute and Italian Cryptogamic Laboratory of the University at Pavia (P.O. Box 165, Pavia, Italy) possesses several almost complete sets of the: *Atti Istituto Botanico (Laboratorio Crittogamico) Università di Pavia:*

Series II — Vol. I to XVIII; (6642 pag. with plates) (1888-1921); Series III — Vol. I to III (719 pag. with plates) (1924-1927); Series IV — Vol. I to XIII (3990 pag. with plates) (1929-1941); Series V — Vol. V to XV .... (4735 pag. with plates) (1942-1958 ....) mostly devoted to pure and applied botany including mycology, plant pathology, plant physiology, taxonomical botany, phytosociology, etc.

Exchange with similar set of biological or natural sciences magazines, or Transactions of Universities and Institutes is requested.

NOTICES OF BOOKS

Contributions to this column will be gratefully received by Dr. K. U. Kramer, Botanical Museum, Lange Nieuwstraat 106, Utrecht, Netherlands.

Flora of the Sahara

P. Ozenda: Flore du Sahara septentrional et central. Centre National de la Recherche Scientifique, Paris, 1958. (486 pp., 176 figs., 16 plates, several maps; with keys, descriptions, notes on distribution, climate, soils, plant geography, and ecology).

Flora of Tropical East Africa

B. Verdcourt: *Melianthaceae.* (7 pp., 1 fig.); *Cornaceae* (3 pp., 1 fig.).

P. Taylor: *Primulaceae.* (20 pp., 5 figs.).

J. H. Hemsley: *Caricaceae.* (4 pp., 1 fig.).

J. Elffers & P. Taylor: *Resedaceae.* (6 pp., 2 figs.):

All London, 1958.

Flora of Madagascar

Flore de Madagascar et des Comores. M. Keraudren: 97. Connaracées. (28 pp., 5 figs.); 158. Cornacées. 158bis. Alangiacées. (21 pp., 4 figs.).

Paris, 1958.

Flora Malesiana

Flora Malesiana Ser. I vol. 5, pt. 4. Sept. 1958.

M. J. van Steenis-Kruseman: Malaysian plant collectors & collections. Supplement I. (pp. ccxxxvii-cccxlii; separately obtainable at the price of Dfl. 10.—).

C. den Hartog: *Hydrocharitaceae.* (pp. 381-413; 19 figs.).

P. van Royen: *Batidaceae.* (pp. 414-415; 1 fig.).

K. Bakker: *Restionaceae.* (pp. 416-420; 2 figs.).

Ding Hou: *Centrolepidaceae.* (pp. 421-428; 7 figs.).

Id.: *Rhizophoraceae.* (pp. 429-492; 35 figs.).

P. W. Leenhouts: *Connaraceae.* (pp. 495-541; 15 figs.).

J. P. D. W. Payens: *Erythroxylaceae.* (pp. 543-552; 4 figs.).

(Also addenda, corrigenda & emendanda, and index).

Umbelliferae of Asia

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B. P. G. HOCHREUTINER
1873 - 1959

Charles Baehni (Genève)

Les botanistes qui suivent l'évolution des méthodes et des problèmes de la nomenclature depuis un quart de siècle apprendront avec chagrin le décès du Professeur Benedict-Pierre-Georges Hochreutiner, survenu le 5 février 1959. Beaucoup d'entre eux se rappelleront ses interventions pathétiques au Congrès de Stockholm, en particulier celle où il repoussait l'idée d'introduire dans le code le principe des *nomina specifica conservanda* et où les auditeurs sentirent réellement passer le souffle des grands ancêtres dont Hochreutiner continuait la pensée.

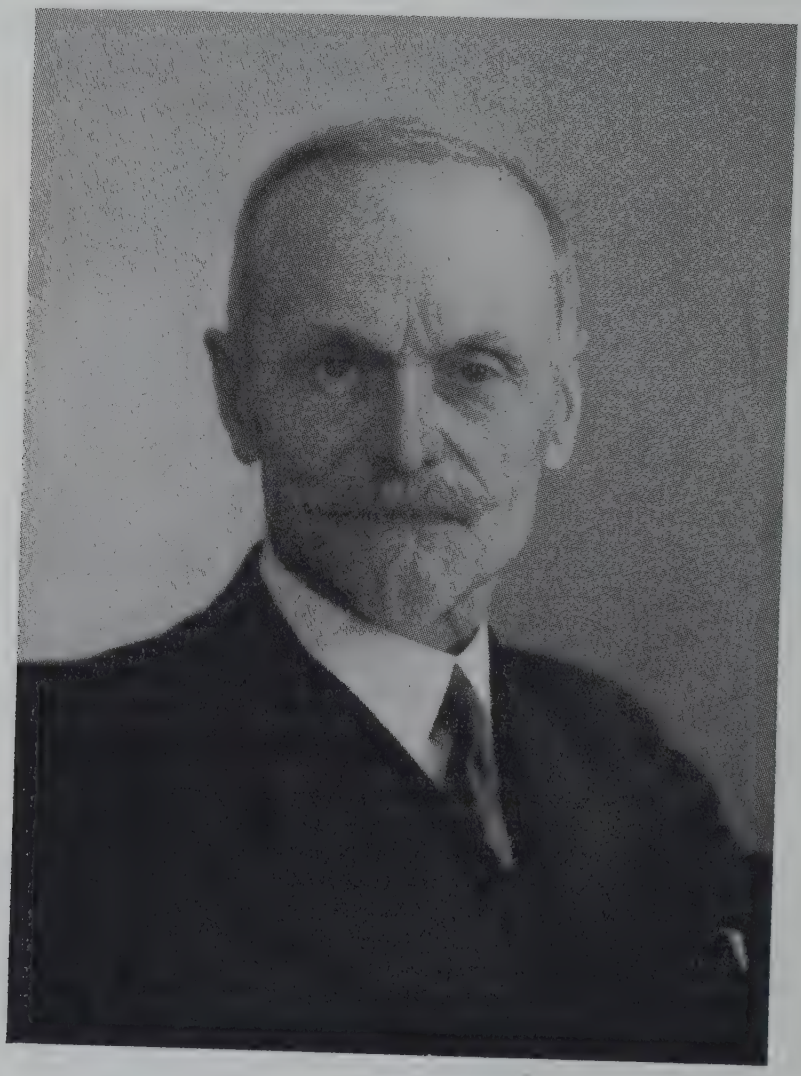
Ce souci de la tradition — qu'il tenait de Briquet, son contemporain, et de Casimir de Candolle avec lequel il était étroitement lié — ne représentait cependant qu'un des aspects de cet esprit curieux de tout. Dès son entrée à l'Université, il manifesta, en effet, un vif penchant pour la philosophie: il mena ainsi de front ses études dans les deux facultés des Sciences et de Théologie; il obtint en 1896 son doctorat ès-sciences et en 1911 seulement, le baccalauréat en théologie par la publication d'une première thèse sur les Phanérogames aquatiques du Rhône, et d'une seconde sur la philosophie d'un naturaliste, essai de synthèse du monisme mécaniste et de l'idéalisme solipsiste.

En 1911, il avait déjà un bagage scientifique assez considérable: il avait exploré le Sud-Oranais, il avait séjourné près de deux ans à Buitenzorg, il avait fait un voyage autour du monde et rapporté des collections importantes. Enfin, il avait participé activement au Congrès de Paris et surtout au Congrès de Vienne où se prirent, comme on sait, des décisions capitales pour la nomenclature. Nous noterons au passage qu'on parlait alors de la "question brûlante de la nomenclature"; on allait jusqu'à dire: "la question complexe de la nomenclature", mais aucun des congressistes ne se doutait à quel point cette "question" allait, d'embrasement en complexité, se donner l'apparence de faire trembler sur ses bases la botanique tout entière.

Hochreutiner se jeta avec impétuosité dans la mêlée. Par la plume et par la parole (il parlait l'anglais et l'allemand avec facilité) il entreprit de défendre et de propager ses propres idées et celles de Briquet. Si dans ces dernières années il avait paru prendre une attitude conservatrice plutôt que révolutionnaire, c'est qu'il avait très tôt reconnu que les changements, les améliorations, même les éclaircissements qu'on apporte à un Code établi ont trop souvent les répercussions que même un botaniste chevronné ne prévoit pas toujours. Il répétait volontiers — et je ne crois pas que ce fût un signe de vieillesse, bien au contraire — qu'il préférait un Code imparfait mais stable à un Code perfectionné sans cesse, donc instable. Il restait fidèle à ces

N.S.P. RAM
COMMONWEALTH MYCOLOGICAL INSTITUTE
27 APR 1959

lignes qu'il écrivait à la veille de l'ouverture du Congrès de Vienne: "La nomenclature n'est pas une science *per se;* c'est un moyen, un instrument qu'il importe de mettre à la portée de tous. En pareil cas, par conséquent, l'opportunisme devient presque un devoir. Si l'unité pouvait se faire, fût-ce au même prix d'un *Index inhonestans* très étendu et très *inhonestans,* cette solution nous paraîtrait encore



B. P. G. Hochreutiner

préférable à un schisme ou à l'état actuel". Appuyée *expressis verbis* par Treub chez qui Hochreutiner travaillait alors, cette déclaration conserve encore toute sa force convaincante. Je vois très bien qu'on aurait pu accuser son auteur de se contredire lui-même lorsqu'il refusait l'unité au prix qu'on voulait lui faire payer, bien des années plus tard, au prix d'une liste de *nomina specifica conservanda* dont il repoussait le principe avec énergie. Mais s'il agissait ainsi, c'est que son esprit, mûri au

contact des éminents juristes qu'étaient les Candolle, répugnait profondément à des solutions (opportunistes évidemment) qui auraient détruit par leur application les fondements de l'édifice élevé patiemment, logiquement par les Congrès successifs. Autant la liberté lui était chère, autant l'arbitraire lui faisait horreur. Or, pour lui, entreprendre l'établissement d'une telle liste, c'était en fait, ouvrir la porte à l'arbitraire.

Son oeuvre, dans le domaine de la systématique, embrasse une part de travaux consacrés aux Tiliacées, aux Bombacacées et surtout aux Malvacées sur lesquelles il avait acquis des connaissances très étendues. Son dernier travail important aura été la révision des Malvacées malgaches pour la "Flore de Madagascar" dirigée par son ami H. Humbert.

Hochreutiner, qui était né en 1873, à Genève, a fait toute sa carrière au Conservatoire botanique de sa ville natale. Entré comme assistant de Briquet en 1896, devenu conservateur en 1906, presque du même âge que son "patron", il n'avait jamais pensé qu'il devrait un jour prendre sa succession, et surtout il n'avait jamais imaginé qu'il serait en outre chargé d'un enseignement universitaire. Le double héritage qui lui échut à la mort de John Briquet et à celle de Robert Chodat, a dû peser bien lourdement sur les épaules d'un homme qui avait déjà dépassé la soixantaine. Cependant, entraîné physiquement par la pratique des sports et, intellectuellement par 30 ans d'enseignement dans les écoles supérieures, il sut rendre encore de grands services aussi bien à l'Université qu'au Conservatoire, préparant notamment la voie pour une réunion des herbiers genevois qu'on est en train d'exécuter au moment même où il disparaît.

Il avait choisi en France son admirable compagne et tout naturellement, c'est avec les botanistes de ce pays que se nouèrent les liens d'amitié les plus nombreux et les plus étroits. C'était d'ailleurs l'un des traits les plus saillants de son caractère que cette fidélité dans l'amitié préservée malgré l'usure du temps et malgré les distances.

Il laisse le souvenir d'un homme fin, cultivé, courtois, passionné pour la science et pour son pays qu'il aura servis tous deux avec un indéfectible dévouement.

A. H. G. ALSTON

1902 - 1958

P. R. Bell (London)

In the premature death of Arthur Hugh Garfit Alston systematic botanists have lost a distinguished colleague. He was born on the 4th September, 1902, at the small village of West Ashby, Lincolnshire, the youngest son of the vicar, the Reverend F. S. Alston. Hugh Alston was educated at Marlborough, and subsequently at Lincoln College, Oxford. He died in Barcelona on March 17th, 1958.

Alston's father, an amateur naturalist, was responsible for kindling his son's interest in biology, an interest which never waned throughout his life. He collected insects at his preparatory school, and at his public school, although he initially studied classics, he came under the influence of A. G. Lowndes, one of the finest biology masters that English schools have known. Alston changed to science, became one of the School's leading botanists, and proceeded to Oxford to study botany under Keeble. He graduated in 1924.

From Oxford Alston went to Kew to work for a short time under J. Hutchinson. Here he completed monographs on the genera *Cassipourea* and *Englerastrum*, subsequently published in the Kew Bulletin. In 1925 he was appointed Systematic Botanist in the Department of Agriculture, Ceylon, and was placed in charge of the

Herbarium and Museum in the magnificent Botanic Gardens at Peradeniya. Besides a general supervision of the naming of the plants in the Gardens and the introducing of new ones, he acted as editor of the *Ceylon Journal of Science, Section A* (formerly

A. H. G. Alston, 1958 (Photograph by Francis Ballard)

the *Annals of the Royal Botanic Garden*). Alston also completed at this time a supplementary volume to Trimen's *Handbook to the Flora of Ceylon* and *The Kandy Flora*, an illustrated work published in Colombo in 1938, together with several shorter papers in the *Journal*.

Alston returned to England in 1930 to take up the post of Assistant Keeper in the Herbarium of the British Museum (Natural History). It was from this time that he began to specialize in the Pteridophyta, in the systematics of which he became an acknowledged master. The enormous genus *Selaginella*, with over 700 species, was reduced to taxonomic order largely as a result of his labours, the species of each area being revised in turn until the World had been covered. His knowledge of the ferns was hardly less extensive. As his reputation became established, so did the material sent to him for naming increase in quantity and extend in provenance until Alston's experience of the Pteridophyta became truly world-wide. Despite this specialization in the Pteridophyta, Alston maintained an active interest in other branches of botany and authoritative notes appeared at intervals from his pen upon subjects as diverse as the identification of grains found in excavations of Iron Age villages and (with R. E. Schultes) the history of the identification of *Ilex vomitoria* as the source of the famous ceremonial emetic formerly used by the Indians of the South Eastern United States.

Not least amongst the factors which shaped Alston's development was his personal experience of living plants in so many regions of the World, an experience denied to all but a few botanists today. Ceylon introduced him to a tropical flora, the fascination of which was never to leave him. In 1938 he visited Venezuela, travelling up into the Colombian Andes and making extensive collections. In 1953, at the invitation of the Government of Indonesia, he went to Java, Sumatra and other islands of Malaysia, adding numerous excellent specimens, together with valuable field notes, to those he had already contributed to the Museum. In Africa, relatively well botanized, he visited only the northern part, and in Europe he aimed to collect in the lesser known parts, such as Macedonia, Bosnia and Southern Albania. It was an extensive knowledge of the World's flora acquired in this way that enabled him, for example, to recognize at once that *Gomphrena celosioides*, a native of South America, seen growing in grassy places in Colombo as he passed through on his way home from Indonesia, was a weed new to Ceylon.

An important element in the equipment of the systematist is a knowledge of whereabouts and condition of the older type specimens and collections. Here Alston was a mine of information, much of it, unfortunately, never committed to paper. Well before the last war he was examining and photographing type specimens in the herbaria of Europe, and by the time of his death he had visited most. His familiarity with the European collections and his concern for the maintenance of scholarship made him an ideal person to be asked to report on the state of taxonomic botany and herbaria in certain areas after the devastation of war.

As a person Alston had many of the marks of genius. To the young he often appeared distant, absorbed and unapproachable. He was undoubtedly an individualist, and one who would never have been happy to have himself regarded as a member of a team. He suffered from the disadvantage of being thought by many a recluse, although in the right environment no one could be more convivial. In practical matters he often appeared at a loss. The reason for this was no simple lack of ability, for, unaccompanied by any of his countrymen, he accomplished journeys where the amenities of civilization were negligible, if present at all, and his success and results indicate a skill shared by few collectors. As a scholar, Alston could rightly be regarded as austere, and his attitude to science aristocratic. Although professional qualifications were not regarded by him as essential, he was clearly, at least in his later years, more at ease with those he regarded as having entered the community of scholars than with others. To young pteridologists he was a source of inspiration and encouragement that they will remember with affection. His experience and knowledge were freely at their disposal and if he released pieces of essential information as if

by accident it was not because of any professional jealousy, but because he was unaware that information familiar to him was not equally so to them. They soon discovered that they learnt most, not by intemperate questioning, but by enjoying Alston's company and conversation, and being prepared to give as well as to receive.

In pteridology it seems likely that Alston will be remembered more for his ability to discriminate species and for classification of those already described, than for general schemes of relationship, although his views on the subdivision of the Polypodiaceae were recently put forward in *Taxon*. His interest in broad schemes of classification probably arose more from a desire for systematic utility than a search for phylogeny, and his acceptance of phylogenetic relationships was always cautious and often sceptical. Nevertheless, he followed the contributions of cytology to pteridology with enthusiasm and devoted much time to promote this study. The advance in our knowledge of the Pteridophyta, so considerable in recent years, will certainly be severely checked by Alston's death.

A list of Alston's publications and itineraries is being prepared at the British Museum (Natural History).

THE PROBLEM OF LATER STARTING POINTS IN ALGAE

J. Komárek, Z. Pouzar et J. Růžička (Praha)

In the article "Later starting points in Algae" by P. C. Silva, published in Taxon (7: 181-184, 1958) the author draws attention to the difficulties connected with the use of the so called "later starting points" and he suggests their elimination. The present authors have been working for some years in groups for which the "later starting points" are given in Art. 13 of the Intern. Code 1956 (Cyanophyta, Fungi, Desmidiaceae). They regard Silva's conclusions as not convincing and do not agree with them. For their support, they bring the following reasons:

1. The "later starting points" restrict, to a considerable degree, the possibility of the subjective and arbitrary conception of different taxa. Nordstedt, one of the greatest of desmidiologists, initiated the institution of the "later starting point" for Desmidiaceae because of the impossibility of an exact identification of the formerly described species. All these obscure species were instantly removed in this way. We regard Nordstedt's argumentation (espec. in Bot. Notiser 1906: 97-118) as quite correct and as, in itself, giving sufficient grounds for the institution of the corresponding starting point. Silva, on the contrary, argues that those species can be rejected, if their names have been used in different senses and so have become a long persistent source of error. (Art. 65).

Still, this way of thinking is quite subjective. Each worker can, and certainly, should have his opinion on whether certain taxa, insufficiently described in the older literature, are clear or not, etc. (taking into consideration the impossibility of revision of the type material, which is a very frequent case in the algology). The abolished "later starting points" would have to be substituted by another authority that could reliably clear up all questions of that sort. E.g., it would be necessary to establish thorough lists of conserved names, not only of generic, but also of specific and, even of infraspecific taxa. The institution of "later starting points" is decidedly a much simpler solution, and we prefer it. Even when the "later starting points" (esp. the older ones) cannot eliminate subjective interpretations, they restrict them considerably.

If we conserve the existing "later starting points" for filamentous Cyanophyta, it will be necessary to conserve the genera Lyngbya Ag. ex Gom. and Anabaena Bory

ex Born. et Flah. (Silva, l.c.). We consider this eventuality as a lesser evil than the abolishing of the "later starting points", which would require the conservation of other genera, and which would necessitate very difficult revisions of the type material of many old genera.

Differences in opinion as to whether an organism corresponds to the description of a former author are frequent even nowadays in the groups of Algae for which no "later starting point" has been established. There are many examples. We quote only at random: The species Microcystis protogenita (Bias.) Rabenh. was determined bij Forti (De Toni's Syll. Alg. 5, 1907) as "saltem ex parte, Protococci sp.", by Drouet and Daily (Butl. Univ. bot. Stud. 12, 1956) as "Flagellates"; both revisions are based on exsiccate type-material.

2. The "later starting points" do not, as a rule, represent an obstruction for accomplishing typification. Silva (l.c., p. 181) considers as one of the chief disadvantages of the "later starting points" the impossibility of typification. This applies only to those Algae for which herbarium specimens (f.e. exsiccata, persistent slides, etc.) can be used for a reliable typification, and for these groups a "later starting point" has not been established.

As for small fresh-water Algae, in many groups such material from the time before "later starting points" is not at our disposal, or typification by means of it is quite impossible. In particular, exsiccatae, even from recent times, are as a rule so deformed that they do not correspond to the original description and we often cannot ascertain in a reliable way what organism they represent. This refers naturally even more to the specimens prepared by means of imperfect methods in the last century.

An excellent example is the taxonomy of Xanthophyceae (= Heterokontae). Pascher (Süsswasserfl., 11: 100, 1925) says about the genus Tribonema: "Die ganzen Nomenklaturverhältnisse sind bei der ganzen Gattung völlig verwirrt; von den alten Autoren wurden die verschiedenen Algen so verschieden und nach äusserlichen Gesichtspunkten zusammengezogen und benannt, dass es völlig ausgeschlossen ist, hier die Synonymik durch historisches Studium zu klären. Hier kann nur reiner Tisch gemacht werden....". For the older species of Xanthophyceae it is, nowadays, impossible to determine the type owing to the imperfect descriptions and figures and the impossibility of establishing the identity of the type material. All modern algologists work, therefore, according to Pascher's monograph (Rabenhorst's Kryptogamen-Fl. 11, 1939). As a matter of fact, it is not a starting point and a great part of it is in contravention to the fundamental rules of the code (priority etc.). There is scarcely any other way of escape from this vicious circle than to proclaim Pascher's monograph of the year 1939 as the starting point.

The abolition of "later starting points" would add to the groups for which it is impossible to follow many articles of the Code; it is also necessary to have regard to the authority of the Code.

For plants of which it is impossible to preserve a type specimen (and this applies to most of lower Algae), the Code allows that the type may be a description or figure (Art. 10, Note). The descriptions and, especially, the figures of older authors are very often obscure. The descriptions are very brief, the authors lay stress on other features than those we consider important, and they do not satisfy our demands. Most of the older figures are still less serviceable. The situation is worse the older the literature we examine. By abolishing the later starting points the oldest, i.e. the most confused, part of the literature will again come in force for nomenclature.

Algology is for the most part a discipline a hundred years younger than Phanerogamology and its state of development corresponds to this fact. It is, therefore, quite natural if its starting points are a hundred years younger. If the "later starting points" were abolished in Algology, it would cause the same difficulties as would

arise in Phanerogamology were its own starting point put back a hundred years.

3. A purely practical reason for maintaining the "later starting point" is that it restricts to an important extent the literature necessary for work in taxonomy. The ancient literature with imperfectly described taxa from the time before the starting point date is consequently for the most part superfluous; that is just the literature we can get only with the greatest difficulties or not at all. It is deposited only in the largest libraries and inaccessible to most of the workers. The starting point work itself and the younger literature are easier to obtain.

A great quantity of old literature is no longer required after the introduction of a "later starting point", we see this in, e.g., the "later starting point" for "Nostocacées hétérocystées" (Bornet et Flahault, 1886-88); there the citations of old and scarcely identifiable synonyms very often fill many pages.

Many of the unsatisfactory consequences of a "later starting point" experienced by the mycologists are due to the fact that their "later starting points" were not chosen properly in many cases. Many groups of Fungi were already better elaborated in older literature than they were in the "starting point". In Algology the choice of the "starting point" was happier and the advantages following their use balance their disadvantages.

It is true that up-to-now in Algology only few authors have followed the prescriptions concerning "later starting points" (Silva, l.c.). This is not an argument for their abolition. The authors who are not willing to keep the Art. 13 of the Code also do not respect other rules of the Code and use names quite arbitrarily.

We therefore decidedly recommend: The existing "later starting points" should not be abolished and the Art. 13 should be kept in force. We are sure that it will prove necessary to re-establish them again as soon as the workers start to deal in detail with questions of the nomenclature of the groups to which they apply.

CONCERNING LATER STARTING POINTS IN ALGAE

Rolf Grönblad (Karis, Finland)
Arthur M. Scott (New Orleans, Louisiana)

Following the publication of a paper by P. C. Silva entitled "Later starting points in Algae" (Taxon VII(7): 181-184, 1958) another article is published above by three Czechoslovakian botanists, J. Komárek, Z. Pouzar and J. Ruzicka, entitled "The problem of later starting points in Algae", a typescript copy of which we have read through the courtesy of Dr. J. Ruzicka. Their article deals principally with the Cyanophyta, but also Desmids are taken into consideration. Our experience, of more than 40 years for the senior and 20 years for the junior author, is solely with the Desmidiales, and it is with regard to this group that we wish to discuss Silva's numbered paragraphs.

(1). "Later starting points violate two of the most basic principles of the Code, namely, priority of publication and the type method". Surely this objection must have been raised, considered, and settled long ago when Ralfs 1848 was selected as the starting point for desmid nomenclature and inserted in the Code. Why bring it up again?

(2). "Later starting points create nomenclatural confusion through divergent interpretations of their application". With all due respect to Dr. Silva, it should be mentioned that he is not a specialist on desmids. In this group of plants the 1848 starting point has not created any confusion; on the contrary it has greatly reduced the possibility of confusion. Among our circle of friends who are skilled desmidiologists we do not know of anyone who would want this date changed, and we should be

greatly surprised if any other specialists on this group of plants vote in favor of changing. For desmids Silva refers to Nordstedt, and we also refer to two papers (Hedwigia 32, 1893 and Botaniska Notiser 1906) by this illustrious phycologist, who had a long lifetime of experience with desmids. We do not think that Silva has succeeded in any way in controverting Nordstedt's reasoning. Do we need to fight once more against attempts, such as O. Kuntze's *Revisio Generum Plantarum* and others, to reinstate long abandoned and forgotten names? Or should we go back to the time before Ralfs 1848, when some of his contemporaries believed that desmids were animals, because some of them possess a slight power of movement? That would indeed result in confusion, and would be almost catastrophic for the systematics of desmids.

(3) and (4). Silva cites some nomenclatural problems in the algae resulting from the application of Art. 13, in which desmids are not involved. They have been discussed by the Czechoslovakian botanists.

(5). "Later starting points have seldom been used by specialists of the groups concerned, let alone by general taxonomists of algae". In the case of desmids we think this is not correct. So far as we know, all the best desmidiologists during the last 40 or 50 years have used Ralfs 1848 as the starting point. There are, of course, a few individuals who express their disagreement with the Code in such ways as by using the generic name *Gymnozyga* instead of *Bambusina*, though the latter has been a *nomen conservandum* for 25 years or more. Quite recently F. Drouet and W. Daily, (Butler Univ. Bot. Stud. XII, 1956) have revived the long-forgotten specific name of *Cylindrocystis "cylindrospora"* (from *Palmella cylindrospora* Bréb. 1835) instead of the generally known *C. brebissonii* Menegh. 1838 that has been used for more than 120 years, and was also used by Ralfs though he thought the plant was a *Penium*. We regard these and similar examples as bad practices that should be condemned.

(6). In this paragraph Silva discusses typification and recommends 1753 as the starting point for *all* algae. Desmids and most other microscopic algae are typified by descriptions and illustrations, the latter being by far the more important. According to W. & G. S. West, the earliest recorded descriptions and figures of British desmids are found in Dillwyn's British Confervae 1809; Smith's English Botany 1790-1814; and some others of later date. Nordstedt's Index, p. 288, lists the desmid genera in chronological order, the first few items being: 1774, "Corpicetti a bacello" Corti; 1781, "Der halbe Mond" Eichhorn; 1784, Vibrio sp. Müller; 1802, "Conferve inédite" Girod-Chantr.; and then the first generic name — *Echinella* Achar. 1810. This proved untenable, however, and so the first genus recognized today is *Closterium* Nitzsch 1817. So it would be quite useless, even senseless, to make 1753 the starting date for desmid nomenclature, since none of them received botanical names until half a century later. Ralfs 1848 was the first work to publish any considerable number of good illustrations of desmids, and that is why his work was selected as the starting point for desmid nomenclature. Writing 56 years later, W. & G. S. West in the preface to their monograph on British Desmidiaceae referred to Ralfs' work as "this classical volume", and stated "Ralfs' book stands today as the only monograph extant containing accurate figures of these simple plants".

It seems to us that the study of the Code itself has become an independent discipline and a hobby of some scientists, quite distinct from the taxonomic study of the plants themselves, but apparently considered of equal importance. However, the nomenclatural rules are intended only as a helpful means by which the classificatory system can be built up more easily, correctly and consistently.

In conclusion we recommend most strongly that Silva's proposal should be rejected insofar as desmids are concerned. It should not be allowed that persons who are

not thoroughly familiar with the systemacy of desmids should have the right of deciding how taxonomical questions in this group of algae are to be treated by the Botanical Congresses.

INFRASPEZIFISCHE TAXA OHNE ANGABE DER KATEGORIE

J. Komárek, Zd. Pouzar et J. Růžička (Praha)

Raciborski (Pam. Wydz. III Akad. Umiej. Kraków 10: 67, 1885) hat eine gewisse Abweichung der Art Gonatozygon brebissonii De Bary unter dem Namen "b) vulgaris" beschrieben. Dieselbe Alge haben später W. et G. S. West (Trans. Yorksh. Natur. Un. 22: 39, 1900) als "var. minutum" publiziert. Welche von diesen zwei taxonomischen Synonymen hat Priorität in der Rangstufe "varietas"?

Cleve (Öfvers. kongl. Vetensk.-Akad. Förhandl. 1863: 487, 1864) hat die bisherige Spezies Euastrum semiradiatum Näg. als ein infraspezifisches Taxon zur Art Micrasterias truncata (Corda) Bréb. versetzt, aber nur mit Sternchen versehen: "*semiradiata Näg.". Erst Wolle (Desm. U.S., 1884) hat sie in der Legende zu Taf. 38 Fig. 7 als "var. semiradiata Naeg." bezeichnet. Seit welchem Jahre, 1864 oder 1884, ist das Epitheton "semiradiata" als Varietät gültig publiziert, und wer soll als sein Autor zitiert werden: "var. semiradiata (Näg.) Cleve" oder "(Näg.) Wolle"?

Hier sind zwei zufällig herausgenommene Beispiele von infraspezifischen Taxa ohne Angabe der Rangstufe (Kategorie) angeführt. In der Botanik bestehen jedoch sehr viele solche Fälle, allein in der Familie Desmidiaceae einige Dutzend.

Der Intern. Code der bot. Nomenklatur, 1956, in dem Art. 49 2. Beispiel erkennt indirekt die Berechtigung auch eines solchen Epithetons ("Fumaria bulbosa γ solida L.") an, löst jedoch nicht die Frage, in welcher Rangstufe es publiziert wurde. Dies hat jedoch oft eine Grundbedeutung: über die Priorität entscheidet oft auch die Rangstufe: "Niemals besitzt ein Name oder ein Epitheton Priorität ausserhalb seiner eigenen Rangstufe" (Art. 60, 2. Satz). In welche Rangstufe gehören jedoch die mit einem Sternchen oder einem Buchstaben bezeichneten Taxa?

Die tschechoslowakischen Botaniker haben zwei Alternativen zur Lösung dieses Problems vorgeschlagen (Taxon 7: 276-278), von welchen jedoch im Synopsis of Proposals (Regn. veg. 14: 11 et 60) keine empfohlen wurde, mit Hinweis auf die schon existierende Vorschrift des Art. 44. Dieser Artikel erklärt jedoch nur diejenigen Namen für ungültig veröffentlicht, welche nach dem 1. Jänner 1953 ohne deutliche Angabe der Rangstufe publiziert wurden. Es bleiben demnach viele Namen aus der älteren Literatur (hauptsächlich aus dem vorigen Jahrhundert) in Geltung, deren Priorität in einer heute benützten Kategorie man nur deshalb nicht beurteilen kann, da es nicht bekannt ist, in welcher Rangstufe sie ursprünglich publiziert worden sind. Auch in "starting-points" finden sich solche Fälle. Es ist eine wichtige Lücke in den bisherigen Vorschriften des Code, dass solche Fälle ohne verbindliche Lösung bleiben, sodass ein jeder sie willkürlich auslegen kann.

Folgende einfache Lösung würde vielleicht der bisherigen Praxis am besten entsprechen, und die kleinsten Änderungen an Zahl in den Autorennamen verursachen: "Dem neuen Namen, welcher ohne deutliche Angabe der Rangstufe bis zu dem 1. Jänner 1953 publiziert wurde, muss man die Rangstufe zuerkennen, in welcher ihn (mit solcher Angabe) der nächstfolgende Autor veröffentlicht hat; dabei wird jedoch nur der Name des ursprünglichen Autors zitiert, und die Priorität seit dem Datum der ursprünglichen Publikation bewahrt". Auf diese Weise würde demnach im zweiten von den obenangeführten Beispielen der Name "var. semiradiata (Näg.) Cleve" lauten, mit der Priorität in der Rangstufe "varietas" seit dem J. 1864.

Als das Wichtigste betrachten wir jedoch, dass die Lösung (wie sie auch sein mag) nicht aufgeschoben und die Lücke in dem Code möglichst bald abgeschafft werde.

THE ORGAN-SPECIES CONCEPT AND THE INTERNATIONAL CODE OF BOTANICAL NOMENCLATURE*

G. O. W. Kremp, H. T. Ames et N. O. Frederiksen (United States)

The *International Code of Botanical Nomenclature* (1956, p. 8) states that the committee for palaeobotanical nomenclature has decided to undertake a wholesale revision of Appendix II, "Special Provisions Concerning Fossil Plants", on the occasion of the forthcoming International Botanical Congress at Montreal in 1959. Such a revision should be thoroughly discussed by palynologists as it involves numerous problems concerning the nomenclature of fossil spores and pollen.

The need for a special Appendix within the Code pertaining only to fossil plants has often been questioned. In almost every case paleobotanical research is restricted to the investigation of detached organs of fossil plants. This means that paleobotanists have no alternative but to group fossil specimens into the special taxa organ-species, organ-genera, and form-genera. These taxa are different from those taxa which are controlled by the main body of the Code; therefore, they demand special regulations which, for practical purposes, are assembled into a single appendix.

The first proposals for such an appendix were formulated in 1935 at the meeting of the Section of Paleobotany of the International Botanical Congress. The term organ-species was never mentioned in this appendix or in its revisions. Perhaps this was by accident, perhaps however it was by intent to avoid any controversy. In either case the Code and its Recommendations speak only of "species of fossil plants" and yet the difference between an "organ-species" and a "species of fossil plants" seems basically important, so much so that this difference should be clearly understood before any attempt is made to revise those parts of the Code which pertain to fossil plants.

The problem is this — When a paleobotanist describes and names a fossil which is only a detached organ of a fossil plant, does he then describe an organ-species or a species of fossil plants? As pollen and spores are one of the most widely known plant organs and one of the most valuable due to their many morphological particularities, they seem to be an excellent example for the discussion of this problem.

Applied to pollen and taken verbatim the term "organ-species" might suggest that the fossil pollen of the plant of *Betula pubescens* Ehrh. for example are one organ-species and the pollen of *Betula verrucosa* Ehrh. are another. Palynologists know however that pollen of both these birch species are very similar and are not easily differentiated from one another or from pollen of similar species. In general, the pollen flora of postglacial peat deposits, the best known fossil pollen flora, can be subdivided only to the generic level. Therefore palynologists working with postglacial sediments generally apply names like *Betula, Alnus, Picea, Pinus,* etc. without specific designation.

In recent years progress in morphological research has made it possible to distinguish some sub-generic groups of fossil pollen. Godwin, 1956, for example reports that Terasmaë, 1951, and D. Walker have distinguished *Betula nana* pollen from that of the tree-birches, although the pollen of the latter has not yet been subdivided. Erdtman, 1953, showed the morphological differences between the pollen of *Alnus incana* and *A. glutinosa,* while Russian palynologists appear to have successfully subdivided the fossil pollen of *Betula, Pinus* and some other genera. The importance of such detailed morphological research was pointed out by L. V. Golubeva, 1957.

In spite of progress in pollen morphology, the fact remains that palynologists are still unable to identify all important living species of plants by the shape and morphology of their fossilized spores and pollen. What is true for pollen and spores of quaternary deposits is even more applicable to fossil pollen and spores from Tertiary and older deposits. It must be assumed that these smallest morphologically definable units, generally referred to as taxa, are in reality assemblages derived from several natural species. If names are given to these units it would be unrealistic to state that these names are given to species of fossil plants.

*) This paper, presented at the Fifth National Pollen Conference (A.I.B.S. Meeting, August 24-28, 1958, Bloomington, Indiana) is Contribution No. 58-56, College of Mineral Industries, The Pennsylvania State University.

Only names of so-called "organ-species" are being dealt with.

Thomson and Pflug appear to be correct when they assume that, in general, an organ-species of fossil spores or pollen may encompass the pollen of almost a whole natural genus of plants.

The crucial fact is that it is not possible to be sure in all cases that the specimens combined into one morphological unit, thus into one organ-species, belong in reality within a single genus of plants.

It seems unlikely that scientists working with other detached organs of fossil plants, e.g. wood, leaves, or even cones and seeds are in a much better position. Most of the specimens which they combine under one organ-species epithet may also belong to a variety of different plant species.

Having this fact in mind should help solve many problems concerning the naming of fossil plant organs, especially if it seems desirable to combine organ-species names of extant genera.

Organ-genera

One or more organ-species form an "organ-genus". When considering the difference between an "organ-genus" and a "genus of fossil plants" Thomson and Pflug, 1953, assume that the concept pertaining to organ-species is equally applicable to organ-genera, but on a higher level. In other words an organ-genus of fossil spores or pollen encompasses the pollen of a group of genera and in many cases a whole family of fossil plants or more. It may be correct to generalize this assumption for other detached organs of fossil plants as well. With this assumption however the example given for Article 58 of the International Code presents some difficulty.

Article 58 reads:

"When a taxon of recent plants, algae excepted, and a taxon of the same rank of fossil or subfossil plants are united, the correct name or epithet of the former taxon must be accepted, even if it is antedated by that of the latter."

"Example: If *Sequoia* Endlicher (1847), a genus of recent plants, and *Steinhauera* Presl (1838), a genus of fossil plants, are united, the name *Sequoia* must be accepted for the combined genus, although it is antedated by *Steinhauera*."

Criticism is directed to the example set forth under this Article. Is *Steinhauera* a "natural genus" or is it in reality an "organ-genus"? The answer can be found by a review of the literature related to the genus *Steinhauera*. As the figures clearly show and as the specific descriptions state, all species of *Steinhauera* mentioned by Presl are organ-species. The Latin descriptions of them in Sternberg, 1838, begin with: "Strobilo ovali-subgloboso...."; "Strobilis oblongis...." and "Strobilis minutis ovali-subglobosis....". The genus description begins, "Strobilus ovalis vel oblongus...." and thus describes only strobili. There can be no doubt that the genus *Steinhauera* is not a natural but an organ-genus of cones.

In other respects it was also a very unfortunate choice as an example for Article 58. Schopf, 1948, states: "The name of *Sequoia* was subsequently conserved officially, but there still is no good evidence regarding the generic identity of the respective types of *Steinhauera* and of *Sequoia*." After having investigated the original type specimens, Menzel, 1900, concludes his monograph by saying that the types are in his opinion not remains of conifers. Nathorst, 1910, p. 55 states that if the diagnosis and figures published by Presl clearly had shown that the fruits of *Steinhauera* really are constructed in the same way as in *Sequoia*, then without question *Steinhauera* has to be kept. However this is not the case, neither the diagnoses nor the figures of the three species of *Steinhauera* published by Presl are such that it could be concluded that we are dealing here with cones of *Sequoia*. The diagnoses are not suitable for *Sequoia* cones.

An attempt was made at the International Botanical Congress in Brussels, 1910, to conclude the argument by conserving the name *Sequoia* versus the name *Steinhauera*. To use *Sequoia* and *Steinhauera* in Article 58 as an example for unions between the taxons of recent and fossil plants seems most undesirable. This example should be obliterated from the Rules.

However, it will be extremely difficult to find a good example to replace it. Rhynia and a few other small plants, e.g. mosses are among the few natural genera and species of fossil plants known. Generally paleobotanists find and work with remains of plant parts, thus with organ-genera and organ-species. Traverse, 1957, p. 257, states: "Fossil species of extant genera are organ-species." The same is true also on the generic level. Almost all fossil genera are organ-genera. This opinion was expressed in the "Nomen-

clature Proposals Concerning Fossil Plants" of the Sixth International Botanical Congress at Amsterdam in 1935 (Proceedings, Vol. 1, 1936, p. 367), which states: ".... that an addition should be made to the Rules to insure that the names originally given to detached organs or parts of plants shall only be used in their original significance and shall not be employed in the designation of different organs or of the plant as a whole."

Form-genera.

The Proposals mentioned above further speak of the need ".... to recognize as taxonomic group, organ-genera and artificial or form-genera" and ".... to define how the names of the artificial genera are to be used." Here apparently for the first time the terms "artificial genera" or "form-genera" are introduced into the terminology of an international code. An attempt to define the term form-genus is given in the *International Botanical Nomenclature Rules,* 1950, Article PB 1, which states:

".... the former [organ-genera] are held to indicate a certain degree of natural affinity, while the latter [form-genera] may and in many instances do include species belonging to different families or even groups of higher rank, e.g. ferns and pteridosperms."

In Amsterdam and again in Stockholm, the Section of Paleobotany did not have enough time to prepare an adequate Appendix for the Code, concerning fossil plants. The Editorial Committee for the International Code of Botanical Nomenclature assumed the difficult task of preparing the actual text.

Existing in the literature are a number of form-genera for which the definition given in 1950 cannot be completely adopted. As a result of the efforts of R. Potonié, 1956, p. 82, it becomes evident that there are numerous form-genera which were never used by their authors or others in a strictly nomenclatorial sense but rather in a purely morphological sense. *Monoletes* Ibrahim (1933) and *Aletes* Ibrahim (1933) were originally intended as morphological designations for monolete and alete spores; the same application being made for *Triletes* Reinsch (1881), *Tricolpites* Cookson (1947), *Triorites* Cookson (1950), *Zonotriletes* Luber (1935), *Azonotriletes* Waltz (1935) etc. In time most of these group designations were used as morphological terms or names of form-genera and were finally combined with epithets of organ-species. This did not change, necessarily, the strictly morphological character of such a type of form-genus. It would appear that this procedure dates back to A. Brongniart, 1828, who introduced the form-genera *Neuropteris, Pecopteris,* for neuropteridian or pecopteridian foliage etc. The manner in which these form-genera were sometimes handled is discussed by R. Potonié in his 1956 paper. When Gothan, 1952, revised the form-genus *Neuropteris,* he divided its contents into two new genera *Imparipteris* and *Paripteris.* He left no species in the form-genus *Neuropteris.* When in 1941, Gothan first announced his intention to divide *Neuropteris* he referred to Florin who separated the form-genus *Walchia* in the same manner, in other words distributing its contents into the genera *Ernestiodendron* and *Lebachia* keeping the name *Walchia* only for forms which could not be placed in these "special genera". The same is true for form-genera like *Sporites* H. Potonié (1893) and *Pollenites* R. Potonié (1931). These form-genera were also used in connection with organ-species epithets. However the majority of its organ-species were later placed in other organ-genera. That *Pollenites* never had a type does not concern its author. He applied this name not as a taxon in the strictly nomenclatorial sense of the Code but as a super group name, as a name for a super division, a so-called "anteturma", that is, a large division in a morphological key system. Potonié has stated on numerous occasions that *Pollenites* as well as other form-genera have, in his opinion, no priority whatsoever against any later-published organ-genera which are provided with a type.

To the results of R. Potonié's literature research may be added the following comments. Gothan, after having subdivided the form-genus *Neuropteris,* still used this name in a sort of morphological key system. Gothan speaks of *Neuropterides imparipinnatae* and *Neuropterides paripinnatae.*

The "Nomenclature Proposals Concerning Fossil Plants" which were adopted in Amsterdam in 1935, ask that additions should be made to the Code in order "to define how the names of the artificial genera are to be used". Recommendation PB 6b established in the Code of 1950, seems to be intended for this purpose. It states:

"The names of form-genera should as a rule be used only in their original meaning and subsequent alteration of the diagnostic characters of the form-genera is not desirable."

This recommendation can be meant only for form-genera which are used in a morphological sense and for which no type is expressly indicated. Furthermore it seems that the wording and implication of Article 35, which demands a nomenclatorial type only for recent plants but not for fossil plants, was also influenced by the existence of these morphological form-genera. That these artificial or form-genera were officially accepted is clearly expressed in the following sentences from Article PB 1 of the International Code of 1950:

"But form-genera have been recognized as pertaining to a special morphological category since 1828 (Adolphe Brongniart). Since that time they have been constantly used in taxonomic and morphological literature and they are quite indispensable."

The history of paleobotany has made it evident, however, that there are some weak points in the usage of such form-genera which have no genotype or priority. One of the first who tried to correct this situation was Schopf in 1938. The transition of the form-genus *Triletes* from a purely morphological to a strictly nomenclatorial application is an excellent example for illustrating the situation. In 1881 the form-genus *Triletes* was established by Reinsch. No species were mentioned, the name being applied only in a morphological sense to circumscribe some "trilete bodies". The situation remained unchanged when, in 1886, Bennie and Kidston added numbers instead of species epithets in combinations with *Triletes*. Later other authors described organ-species, e.g. *superbus, glabratus,* and *tuberculatus* and combined them with *Triletes* but they did not feel it necessary to seek a genotype for *Triletes*. They still used the name *Triletes* only in a morphological sense. The situation was basically changed in 1938, when Schopf suggested a type, *Triletes reinschi* (Ibrahim, 1932). Accepting Schopf's suggestion it is possible to use *Triletes* in a nomenclatorial sense after 1938. This form-genus now has a nucleus, and it seems appropriate to accept the publication of Schopf, 1938, as the starting point, after which the priority of the taxon *Triletes* is protected by the Rules. According to the regulation given in Recommendation 46 A, the correct name of the new organ-genus would then be *Triletes* (Reinsch, 1881) ex Schopf (1938) or abbreviated *Triletes* Schopf (1938).

The transition of the form-genus *Triletes* from a purely morphological to a strictly nomenclatorial application could be achieved in an alternative way. The date when the first valid organ-species name was combined with the form-genus name could be accepted as the starting point for the priority. In this case, suppose that *Triletes superbus* Bartlett (1929) was the first valid binomial combination, the correct name of the organ-genus would be *Triletes* (Reinsch, 1881) ex Bartlett (1929) or abbreviated *Triletes* Bartlett (1929). *Pollenites* would then gain priority as of 1931, when Potonié first used it together with specific epithets. The same procedure would have to be applied for *Ernestiodendron, Lebachia, Neuropteris, Imparipteris* and all the other genera mentioned previously. However, if this method of genus validation were used, it would sometimes be difficult to make sure that the very first valid binomial combination had been found; it might easily happen that several years later an earlier paper with such a combination might be discovered, whereupon the genus would be given a new genotype and a new starting point. Another difficulty is that well-defined organ-genera with similar genotypes but published at a later date would sometimes have to lapse into synonomy causing more chaos in the taxonomy.

Above all, however, the typification of form-genera breaks completely with the school of thought under which many such form-genera were established. It does not seem justifiable to make such newly-established regulations retroactive. Many of these names were not intended to designate organ-genera, and on this level they are now superfluous; however, in morphological key systems they are often used to designate smaller and larger groups of organ-genera. Why then change automatically all these artificial genera into organ-genera? Such form-genera now lie beyond the scope of the Code. They neglect one of its more and more generally accepted basic requirements — typification. Therefore it seems neither necessary nor desirable to provide regulations for them within the Code and consequently the above mentioned Recommendation PB 6b should be deleted or changed. These form-genera without a type need cause no great concern. Adding a note to Article PB 1 which confirms the existence of morphological form-genera and which states that the priority of form-genera names is protected by the Rules only when a genotype is expressly indicated for them would solve the problem.

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STARTING POINT OF NOMENCLATURE OF HYPHOMYCETES*

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Proposal No. 321 Article 13. To paragraph 'e' add 'Hyphomycetes' so that the paragraph will read as follows:

'e. Fungi: Uredinales, Ustilaginales, Gasteromycetes, and Hyphomycetes, 31 Dec. 1801 (Persoon, Synopsis Methodica Fungorum)'.

Introduction

I have discussed the application of Article 13f to the Hyphomycetes with a number of mycologists interested in this group, and I understand that it is a source of confusion to them as it has been to me. From a conscientious attempt to apply this Article to a large number of classical Hyphomycetes (see Hughes, Can. J. Bot., vol. 36, 1958), the conclusion was soon reached that Article 13f creates a number of problems which could be solved most simply by using 31: XII: 1801 (Persoon's Synopsis Methodica Fungorum) as the starting point for this group.

It will be noticed that the proposal is restricted to the Hyphomycetes. What the implication of the proposal would be on the other groups included in 'Fungi caeteri' is unknown to me. The different problems associated with the different groups included at present in the 'Fungi caeteri' vary considerably. It is extremely unlikely that any change which is claimed to be good, say for the larger Hymenomycetes, will be equally useful for the microscopic Fungi imperfecti or Ascomycetes. The two last-named groups are of considerable importance in plant pathology, medicine, and industry and deserve close consideration before any all-embracing change of ruling is made which involves them.

In the sections that follow, arguments are presented against the present Article 13f with reference to Hyphomycetes, and in favour of the change proposed. These are included respectively, under the subheadings '1821-1832/33. Fries. Systema' (the present article 13f) and '1801. Persoon. Synopsis' (the proposed starting point for Hyphomycetes).

1. *The starting point for Hyphomycetes.*

A. 1821-1832/33. Fries. Systema.

The present starting point for the Hyphomycetes is an arbitrary date chosen for the first volume of Fries' Systema Mycologicum, namely 1 Jan. 1821: it is not a true starting point like a book which includes all or most of the names of Hyphomycetes published previous to that work. On the contrary, the first volume of the starting-point book (Systema 1) contains no account of the Hyphomycetes except for a mention of generic names in the Introduction to that volume. Validation of pre-1:I:1821 names is effected, therefore, in most instances, in one of the many mycological or botanical publications which appeared after 1:I:1821. This is a multiple starting point; it is complicated by the fact that any names **) of hyphomycetes 'published in other works between the dates of the first (Vol. 1) and the last (Vol. 3, part 2 and index) parts of the Systema which are synonyms or homonyms of names of any of the Fungi caeteri included in the Systema do not affect the nomenclatural status of names used by Fries in this work'.

Fries' treatment of Hyphomycetes is to be found in Systema 3 (Parts 1, 2, published 1829 and 1832/33 respectively). The obligatory use of this work as the 'starting-point book', gives an importance to the names used therein, and implies that Fries knew this group as wel as he did, say, the Hymenomycetes. But this is not so, and I fail to see any advantage whatsoever in maintaining this 'starting-point book' for the Hyphomycetes.

In his autobiography (Elias Fries' Autobiography. Copenhagen. 1955) Fries stated 'At the urgent request of the publisher I was, however, in 1831, against my will obliged to proceed to the last part of the work "Systema Mycologicum" since the eminent Kunze, who had undertaken this work, had postponed the matter. That is the reason why I have only dealt briefly with these species, which are difficult to identify and wonderfully heterogenous in form (though in themselves without any great

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**) 'Names' in Article 13f is interpreted to mean 'specific epithets' and 'generic names', and not 'species names'.

significance, as e.g. the Uredinei, which I would not spend time and paper on enumerating)'.

In spite of his lack of interest in this group, and without adequate optical equipment, Fries subjected the Hyphomycetes to a considerable revision. Although many of Fries' taxonomic judgements are not at present being followed, Friesian 'names' must, according to the Rules, be given precedence.

The date of publication of Systema 1 has been chosen arbitrarily as 1:I:1821. No arbitrary date has been specified, however, for Systema 3 (2 and index) in the International Code, not even 1832, which is the commonly accepted date for the second part of Systema 3. In a bibliographic note to the reprinted edition of Fries' Systema, Rogers presented evidence that Systema 3(2) may well not have been published until 1833. If the present Art. 13f is to stand, then Systema 3(2) needs, I believe, to be related chronologically with other publications known to have appeared in 1832 and 1833. Three of these are, Schweinitz's Synopsis (Trans. Amer. Phil. Soc., II, 4: 141-316. 1832, between May 24 and Aug. 29), Corda in Sturm's Deutschl. Fl., III (Pilze), Bd. 3, Heft 13: 69-96. 1833, and Wallroth's Flora Crypt. German., 2: 1833. The validating author of some names may depend upon the dates of publication of these works in relation to the correct or chosen date for the last part of Systema 3.

More than eighty generic names and over 300 new species of Hyphomycetes had been proposed before the present starting point, 1:I:1821; sixty of the generic names are commonly used today.

B. 1801. Persoon. Synopsis.

Persoon's Synopsis Methodica Fungorum, which is the proposed starting-point book for the Hyphomycetes, is known to have been published in 1801 as one volume and not over a period of eleven years or more, as was Fries's Systema 3(1, 2). It is convenient to choose 31:XII:1801 as the arbitrary date of publication as has already been done in Article 13e for Uredinales, Ustilaginales, and Gasteromycetes.

Persoon's Synopsis, 'the golden book of our age' as Corda described it in 1842 *), was the only important mycological work published in 1801 and is the first synoptical work in which there is gathered together, for the first time and within the confines of a single volume, most of the scattered and fragmentary taxonomic work by earlier authors, including, Persoon himself.

As far as I know, about twenty generic names of Hyphomycetes were published before 1801. These include *Aegerita, Aspergillus, Botrytis, Conoplea, Dematium, Himantia, Isaria, Monilia, Myrothecium, Periconia, Pyrenium, Racodium, Rhizomorpha, Sclerotium, Stilbum, Torula, Trichoderma, Tubercularia,* and *Volutella* (later homonym).

On the first 25 years after Persoon's Synopsis.

A succession of mycological works were produced in the 25 years following the publication of Persoon's Synopsis: the main ones in which Hyphomycetes were described are listed here for convenience.

1809 Link
— Observationes, I
1815 Link
— Observationes, II
1816/17 Nees
— Das System der Pilze und Schwämme
1817 Kunze & Schmidt
— Mykologische Hefte, I.
1818 Ehrenberg
— Sylvae Mycol. Berol.
1818 Nees & Nees
— De plantis nonnullis Mycetoidearum
1822 Persoon
— Mycologia Europaea, I
1822 Schweinitz
— Syn. Fung. Car. Super.
1823 Kunze & Schmidt
— Mykologische Hefte, II.
1824 Link
— Linn. Spec. Plant., IV, 6(1)
1825 Link
— Linn. Spec. Plant., IV, 6(2)
1825 Fries
— Syst. Orb. Veg.

Persoon, in his earlier work, and these authors truly laid the foundations of the study of Hyphomycetes, and it is upon the genera and species proposed by these authors that Fries based his treatment of Hyphomycetes in Systema 3(1, 2).

With the proposed starting point the application of the rule of priority from Persoon's Synopsis is a simple one and the choice of names and of the authors of those names is the reverse of laborious.

*) I am obliged to Mr. E. W. Mason, C.M.I., England, for drawing my attention to Corda's appraisal of Persoon's Synopsis.

2. *Determining the validating author.*

A. 1821-1832/33. Fries. Systema.

Determining the validating author(s) of pre-1:I:1821 names of Hyphomycetes is unusually difficult, laborious and time-consuming with the present Article 13f.

There are more than fifty known mycological works published between 1:I:1821 and the date of Systema 3(2) (D. P. Rogers, in lit.); many of these are rare and found usually only in the larger and long-established Botanical Institutes and National Museums. These works have to be consulted, starting after 1:I:1821, in order to determine the earliest date and earliest author(s) of validation of a particular pre-1:I:1821 name. Donk (Taxon, 6: 252-3. 1957) has already drawn attention to more than six relevant works published in the year 1821: these must be arranged in precise chronological order. It has already been shown (cf. Donk, op. cit.) that Hooker's Flora Scotica, Mérat's Nouv. Fl. Env. Paris, and Gray's Nat. Arr. Brit. Plants, were published in May, June, and November of 1821 respectively. Purton's App. Midl. Fl. was published after Sept. 20th 1821 according to Dr. Rogers (in lit.). Dr. Donk has stated (op. cit.), 'I have been able to establish that Saint-Amans', Fl. Agenaise was published at a still earlier date (April, 1821) and again it appeared necessary to change many author's citations that had been replaced already a few times. Perhaps we are not yet at the end'. It is unlikely that the authors of these publications had any intention of affecting nomenclature in any way: they were, for the most part, compiling an annotated account of fungi found in or reported from various localities. Admirable though these works may be, they were not contributions to the increasing knowledge of Hyphomycetes as were those of Persoon, Link, Nees and so on. Nevertheless, if the present Article 13f is to be applied conscientiously, these hitherto more or less unknown or little used works now become extremely important and essential additions to every mycological library.

B. 1801. Persoon. Synopsis.

The simplicity of application of the proposed new starting point for the Hyphomycetes is borne out by the case experienced in preparing that part of a recently published revision (Hughes, op. cit.) which includes, amongst others, many of the names published before 1821. With this new starting point all names of Hyphomycetes published by Persoon, and later workers, on and after 31:XII: 1801 would of course be valid automatically on the date of their publication: furthermore, Fries' nomenclature would in no way interfere with the strict rule of priority starting from 31:XII:1801.

With this new starting point the important authors are those who actually laid the foundations of the study of Hyphomycetes and whose works may be followed in a logical chronological sequence from Persoon's Synopsis of 1801.

3. *Validation of pre-starting-point names.*

A. 1821-1832/33. Fries. Systema.

The direct result of the late starting point of 1:I:1821 is that over 80 generic names and more than 300 species names of Hyphomycetes are available for validation in works published after this date. Besides the onerous and uncertain task of checking the early literature, one is faced with the question 'What actually constitutes validation?' According to Articles 32 and 39 it would appear that the mere reference (direct or indirect) to an effectively published description accompanying a pre-starting-point name is now admissable as a means of validation. This may well mean that the generic names listed by Fries in the Introduction to Systema Vol. 1 would be valid because in most instances they have indirect references to the original descriptions. This would leave species names to be validated elsewhere.

B. 1801. Persoon. Synopsis.

The inherent difficulties of the late starting point discussed above are almost entirely removed with the proposed starting point. Very few pre-31:XII:1801 names were ommitted from Persoon's Synopsis to require validation after this date so that the problem of what constitutes validation is a very minor one.

4. *Typification of validated pre-starting-point generic names.*

A. 1821-1832/33. Fries. Systema.

There are apparently two views on the typification of validated pre-starting-point generic names. In the *first*, the type is considered to be that single species, or one of the species, which the validating author included in the genus. In the second, and as Donk would now have it (Taxon, 6: 255. 1957), the type species of a validated pre-

starting-point generic name is that single species, or one of the species, which the original author included in it, even though that species may not have been included in the genus at the time of its validation.

The application of the first view is unsatisfactory because it will sometimes result in a change of generic concept depending upon the species which the validating author included in that particular genus. For instance, '*Botrytis* Mich.' ex Gray (Nov., 1821), and *Botrytis* [Mich.] ex Saint-Amans (April, 1821) would, by applying the first method of typification, refer to totally different genera, and quite possibly not to the *B. cinerea* sort of fungus.

The second method of typification seems to be the most satisfactory if Art. 13f, as applied to the Hyphomycetes, is to stand.

Over 80 generic names of Hyphomycetes were published before 1821 so that the typification of these names is a most important problem. It it a problem which arises because the present starting point of the Hyphomycetes was preceded by so much work on this group.

B. 1801. Persoon. Synopsis.

The problem of typification associated with the starting point, 1:I:1821, is reduced to a minimum with the proposed starting point of 1801 because so few generic names of Hyphomycetes are involved.

Many of the generic names of Hyphomycetes published between 1801 and, say, 1821, were monotypic so that the problem of choosing a lectotype does not arise. In the other genera which were polytypic to begin with, little difficulty is experienced in maintaining the current application of some of the generic names and arranging the relegation to synonymy of some others by the suitable choice of lectotype species from the actual species included in that genus by its author.

About 20 generic names of Hyphomycetes had been published before 1801 and Persoon included 15 of them in his Synopsis. The former are listed on p. 4; the latter are listed on p. 12, with citations according to the proposed starting point, indicating that only one replacement is necessary. The pre-1801 generic names of Hyphomycetes omitted by Persoon from the Synopsis and soon afterwards taken up by Link in 1809 are mentioned on p. 14-15. Therefore, all the generic names of Hyphomycetes which were in use before and during 1801 can be accounted for with no difficulty when the proposed starting point is applied.

5. *Typification of species names.*

A. 1821-1832/33. Fries. Systema.

As stated by Donk (op. cit.) two different opinions exist about the typification of pre-starting-point species names validated after the starting point. Some mycologists consider that the specimen of the validating author should be taken as the type, and others believe that the specimen of the original author should be chosen. The latter view seems to me the more reasonable and the only possible one in view of the complete lack of information on the whereabouts of the herbaria of Saint-Amans, Mérat, Gray, and some others, in whose works are validated large numbers of the names of Hyphomycetes.

B. 1801. Persoon. Synopsis.

Typification is a minor problem: the types of post-1801 names are obviously the collections of the particular authors who described them. Type or authenticated collections of the early authors from Persoon onwards are preserved in large numbers in some of the classical European herbaria (Hughes, op. cit.) so that considerable numbers of the species described between 1801 and, say, 1825 can be checked by reference to these collections. A number of specimens still remain to be traced but I have no doubt that a more intensive search than I was able to carry out in 1955 will uncover many of these.

On pre-1801 names of Hyphomycetes. Persoon is apparently the first author who systematically preserved mycological specimens and whose collections are now still in existence; they are housed in the Rijksherbarium at Leiden, with a small number of his collections also to be found at Berlin, Strasbourg, and Paris.

With few exceptions the collections of other authors prior to 1801 are lost. Donk (op. cit., p. 250), with larger Basidiomycetes in mind, stated that some of the early [pre-1801] authors 'published new species with descriptions accompanied by often excellent plates which in most cases permit us to recognise their species with precision'. This may be so with agarics but it is not true

with the Hyphomycetes. Imperfect descriptions and illustrations prepared using optical equipment of low magnification can only in unusual circumstances, if ever, replace a specimen for a reliable determination. We should admit, therefore, that no certainty can ever be assigned to an identification based on a description or illustration alone of one of, say, Tode's species of Hyphomycetes. 'Of course it is perfectly possible for one to speculate on the probabilities in such cases, but positive conclusions can never be inferred from doubtful premises' (Durand, Science, N.S., 29: 670-676. 1909). It is, I believe, of great importance to realize this when pre-Persoonian names, unqualified by collections, are being considered. When recent names of Hyphomycetes with lengthy descriptions can cause some uncertainty in their application, how much more troublesome can be those of Tode, Hoffmann and so on!

Article 7(3) permits a lectotype or neotype to be chosen when a type has been lost or destroyed. In a recent revision (Hughes, op. cit.), published partly to indicate advantage of the proposed starting point, specimens from Persoon's herbarium were chosen to typify the few pre-Synopsis names that were considered.

> *Examples: Dematium ciliare* is a name included in the Synopsis; it originated as '*Hypoxylon ciliare* Bull.' (1789). A collection labelled *Dematium ciliare* by Persoon is chosen to typify this name. *D. ciliare* provides an earlier epithet for *Helmisporium velutinum* Link (1809).
>
> *Botrytis cinerea* Pers. (1801) was proposed originally as '*B. cinerescens* Pers.' (1794). A collection labelled *Botrytis cinerea* by Persoon has been chosen to typify *B. cinerea.*
>
> *Monilia antennata* Pers. (1801) is based on '*Dematium antennaeforme* Hoffm.' (1795). A collection labelled *Monilia antennata* by Persoon and preserved at Leyden, could be chosen to typify *M. antennata.* However, in Berlin I have seen a collection which is authenticated for '*Dematium antennaeforme*'; this and Persoon's collection bear the same fungus.
>
> *Periconia stemonitis* Pers. (1801) originated as '*Isaria stemonitis* Pers.' (1797). The collection labelled *Periconia stemonitis* by Persoon is chosen to typify this name.

6. *On the citation of pre-starting-point authors.*

A. 1821-1832/33. Fries. Systema.

According to Recommendation 50D, 'The citation of an author who published the name before the starting point of the group concerned is indicated, when considered useful or desirable, preferably between square brackets or by the use of the word *ex*'. Perusal of the literature will indicate that the pre-starting-point authors are sometimes omitted and at other times inlcuded in the manner recommended — usually by means of *ex.* It has been shown above that with the present Article 13f some problems are associated with the finding of the validating author, and changes are necessary when earlier validation is found. It is obvious that the later the starting point the greater will be the number of Hyphomycetes which must be considered from this point of view. The starting point of 1:I:1821, therefore, may entail such double author citations for over 80 generic names and over 300 species names.

B. 1801. Persoon. Synopsis.

The number of generic names and species names of Hyphomycetes published before 1:I:1801 is comparatively small, compared with those published before 1821, and with the proposed starting point most of them were validated by Persoon in 1801. The validation of pre-starting-point names, and the question of whether or not to cite the name of the original author are, therefore, small problems; with the proposed starting point only about twenty generic names of Hyphomycetes are involved, and fifteen of these appear in the proposed starting-point book.

7. *The genera of Hyphomycetes in Persoon's Synopsis.*

One of the criticisms made about an early starting point of nomenclature of the Hyphomycetes is that a flood of strange generic names will immediately be validated and these may interfere with well established names in current use. But this is not so.

Persoon included 15 generic names of Hyphomycetes in his Synopsis together with two 'subgenera'. These are listed below with citations according to the proposed starting point. All of these names had been published earlier by Micheli, Tode, Persoon himself, and by others. Only in one instance

is the replacement of a more recent generic name necessary when the proposed starting point is applied: *Conoplea* Pers. replaces *Streptothrix* Corda.

(1) *Aegerita* Pers., based on 9 species: lectotype species, *A. candida* Pers.

(2) *Botrytis* Pers., based on 4 spp.: lectotype species, *B. cinerea* Pers. With the 1821 starting point it is quite possible that *Botrytis* [Mich.] ex Saint-Amans may not refer to the *B. cinerea* sort of fungus (p. 9).

(3) *Conoplea* Pers., based on 4 spp.: lectotype species, *C. sphaerica* Pers. This generic name will replace *Streptothrix* Corda (1839) ? = *Streblocaulium* Chev. (1827).

(4) *Dematium* Pers., based on 17 spp.: lectotype species, ?. This name has been confused from its beginning. In 1801 the genus included at least a *Helmi(ntho)sporium, Cladosporium, Helicosporium, Stachylidium,* and two species of *Trentepohlia.* The name could be rejected because it has been used and continues to be used 'in different senses and so has become a long-persistent source of error' (Article 65).

(5) *Himantia* Pers., based on 6 spp.: Mycelia sterilia.

(6) *Isaria* Pers., based on 9 spp.: lectotype species, *I. truncata* Pers. or *I. crassa* Pers. These are two entomogenous species which Persoon included in the genus.

(7) *Monilia* Pers., based on 12 spp.: lectotype species, *M. fructigena* Pers. This permits the use of *Monilia* for the conidial states of some Sclerotiniaceae.

(a) *Monilia* Pers. ** *Aspergillus* Pers. The name *Aspergillus* was first used at the generic level by Link in 1809 with no reference whatsoever to Persoon's 'subgenus' so that the citation *Aspergillus* Link is legitimate with the proposed starting point: there is no change in the application of the name.

(b) *Monilia* Pers. *** *Torula* Pers. Persoon had already used *Torula* at the generic level before 1801. After the proposed starting point Link was the first to use *Torula* as a genus so that the name may be cited as *Torula* (Pers.) Link with *T. herbarum* (Pers.) Link as type species.

(8) *Periconia* Pers., based on 3 spp.: lectotype species, *P. byssoides* Pers. *Periconia* was described by Tode in 1791 for the single species *P. lichenoides* whose identity is unknown. Persoon included this, *P. byssoides* Pers., and *P. stemonitis* Pers. (= *Cephalotrichum* Link) in 1801. *P. byssoides* is *Periconia* as it is now understood.

(9) '*Pyrenium*', described by Tode (1790) for 3 spp., *P. lignorum, P. metallorum,* and *P. terrestre.* Persoon merely copied out parts of Tode's diagnosis of *P. terrestre,* the only species be included, and added 'Dubius mihi fungus et plane ignotus'. *P. lignorum* has been considered by some to be a green *Trichoderma.* As far as I know, *Pyrenium* has not been used for over a hundred years.

(10) *Racodium* Pers., based on 6 spp.: lectotype species, *R. aluta* Pers. = Mycelia sterilia.

(11) *Rhizomorpha* Pers., based on 3 spp.: Mycelia sterilia.

(12) *Sclerotium* Pers., based on 16 spp.: Mycelia sterilia.

(13) *Stilbum* Pers., based on 16 spp.: lectotype species, *S. rigidum* Pers. *Stilbum* was described originally by Tode for six species whose identity is a matter of conjecture. With *S. rigidum* Pers. as lectotype species, the generic name *Stilbum* can with advantage be used for synnemata terminating in a head of phialides which produce slimy amerospores.

(14) *Trichoderma* Pers., based on 9 spp.: lectotype species, *T. viride* Pers.

(15) *Tubercularia* Pers., based on 6 spp.: lectotype species, *T. vulgaris* Pers.

The proposed starting point, therefore, is not accompanied by any major change in the application of the common generic names of Hyphomycetes used by Persoon in the Synopsis. On the contrary, some classical names are stabilised with the starting point of 1801.

Thirty generic names of Hyphomycetes were proposed in Link's Observationes I of 1809. The only significant change required by the application of the proposed starting point to these names will be the use of *Helmisporium* in place of the orthographic variant *Helminthosporium*; this is considered to be an advantage (see p. 18). As shown in Hughes (op. cit.) there are changes required as a result of examining type collections, but this after all is a taxonomic matter. Thus, *Exosporium* is a synonym of *Helmi(ntho)sporium, Haplaria* and *Polyactis* of *Botrytis,* and *Aleurisma* of *Trichoderma*; the *Oidium* question is discussed on p. 16. In Link's Observationes I were also validated, using the proposed starting point, three of the pre-1801 generic names of Hyphomycetes which were not included in Persoon's Synopsis, viz., *Aspergillus, Myrothecium,* and *Torula. Volutella* was also omitted by Persoon but this is a later homonym.

The use of Link's (1815) generic names *Epicoccum* and *Cladosporium* is unaffected by the proposed starting point.

Nees (1816/17) proposed eight new generic names of Hyphomycetes, *Acrosporium, Alternaria, Dactylium* (? Quid), *Helicosporium, Verticillium, Virgaria, Circinotrichum,* and *Cladobotryum.* The availability of these names in 1816/17, with the proposed starting point, causes no difficulties; in fact, distinct advantages result with regard to *Acrosporium* and *Alternaria* (see below).

Kunze & Schmidt published six new genera of Hyphomycetes in 1818. The application of the names *Bactridium, Arthrinium,* and *Polythrincium* is unaffected by the proposed starting point. For various reasons the three remaining generic names cannot be used; these are, *Hormiscium* (= *Torula*), *Alysidium* (= *Acladium,* see below), and *Scolicotrichum* (= Nomen confusum).

The proposed starting point will cause but few changes in the use of common generic names of Hyphomycetes. Far more changes would result from a strict and conscientious application of the present Article 13f.

8. Effect of proposed starting point on some generic names of Hyphomycetes.

(1) *Alternaria* Nees (1816/17) may be used legitimately in place of *Macrosporium* Fr.

(2) *Oidium* Link is a generic name which has been, and which persists as a source of confusion. It is currently used in at least two erroneous senses, for the conidial states of some Erysiphaceae, and for moulds predominantly found on wood and bark and which have been described also under the names *Acladium* Link, *Alysidium* Kunze, *Haplotrichum* Link, *Rhinotrichum* Corda, and others.

Oidium Link (1809) is based on *O. aureum* (Pers.) Link (≡ *Trichoderma aureum* Pers.). It appears from collections in Berlin and Leiden and also from Link's diagnosis, that he applied Persoon's epithet '*aureum*' in its new position to a different species. Nevertheless 'the new combination must be retained for the species to which the epithet was originally applied, and must be attributed to the author who first published it' (Article 55). Therefore, *Oidium aureum* and *Trichoderma aureum* are nomenclatural variants and it matters not what fungus Link assigned to the name *Oidium aureum.*

Trichoderma aureum Pers. is identical with *Sporotrichum aureum* Link which has been chosen as lectoytpe species of *Sporotrichum* Link (1809, see Hughes, op. cit.). With the proposed starting point, therefore, the troublesome name *Oidium* can be relegated to the synonymy of *Sporotrichum.*

Acladium Link (1809) is perfectly suitable for the so-called *Oidium* spp. of wood and bark; furthermore *Acrosporium* Nees (1816/17) is available for the so-called *Oidium* conidial states of some Erysiphaceae.

With the 1:I:1821 starting point the name for the wood and bark moulds, erroneously assigned to *Oidium,* is *Haplotrichum* Link (1824).

(3) '*Helmithosporium*'. It has been known for some time that this generic name is being used in the wrong sense for graminicolous species; these can more correctly be referred to *Drechslera* Ito, and *Helminthosporium* subg. *Eu-Helminthosporium* Nisikado for which a generic name needs to be proposed.

Helminthosporium, first used by Persoon in 1822, is the unnecessary orthographic variant of *Helmisporium* Link (1809). In the Introduction to Systema 1 (1:I:1821) Fries included '*Helmisporium* Lk.' but in Systema 3(2) (1832/33) he used Persoon's revised spelling. Therefore, with the present starting point the citation is presumably *Helminthosporium* Link ex Gray (Nov., 1821) (as '*Helmisporium*'): but an earlier validating author may well be found.

Gray included two species, *H. nanum* Nees, which is a *Dendryphion* Wallr. (1833), and *H. velutinum* Link, which was Link's original species. Whichever species is chosen to typify the name *Helminthosporium,* the result is the same: *Helminthosporium* cannot be used for graminicolous species of the *Drechslera* and the '*Helminthosporium* subg. *Eu-Helminthosporium*' type.

With the proposed starting point it would be necessary to revert to the original spelling, *Helmisporium,* a name to be typified of necessity by the original *H. velutinum* Link. The subsequent enforced disuse of '*Helminthosporium*' would be advantageous in view of its long and erroneous association with certain graminicolous species.

9. *Summary.*

The proposed starting point for the nomenclature of Hyphomycetes has advantages which may be summarised as follows:

(a) The starting-point date and book are one and the same thing. Under the present Article 13f the starting-point date is 1:I:1821 and there are a number of different starting-point books for the various pre-starting-point

names of Hyphomycetes. The Synopsis was published as a single volume in one year and at a date arbitrarily chosen as 31:XII:1801 as has already been done in Article 13e which covers Uredinales, Ustilaginales, and Gasteromycetes.

(b) The Synopsis Methodica Fungorum marks the beginning of an epoch in mycological history.

(c) It is the only important mycological work published in 1801.

(d) It is the earliest book which includes most of the names of Hyphomycetes published up to 1801.

(e) It bears more or less the same relation to the classification of fungi that Linnaeus' Species Plantarum does to that of the vascular plants.

(f) It was written by an author whose collections are preserved in considerable numbers.

(g) Acceptance of the proposed starting point does not release a flood of old names to replace those which are currently employed. On the contrary, it stabilises the use of a number of currently used generic names which would otherwise have to be replaced.

(h) Validation of pre-starting-point names is a minor problem because of the synoptical nature of the starting-point book.

(i) It removes to a large extent the problem of typification of species names and of generic names.

(j) The problem of whether or not to cite pre-starting-point authors is reduced to a minimum because of the early starting point.

(k) The removal of the Hyphomycetes from the nomenclatural influence of Fries' Systema considerably simplifies the practice of nomenclature throughout the foundation genera and species of this group.

TYPIFICATION OF ZANTHOXYLUM L.

F. R. Fosberg (Falls Church, Va.)

My own failure to go back far enough in ascertaining the facts makes it necessary, now, to add still another to the unnecessarily long series of articles on the nomenclature of *Zanthoxylum* L. (see Taxon 7(4): 94-96, 1958). It did not occur to me to question that the genus should be typified by one of the two species included in it in the first edition of the Species Plantarum. *Z. clava-herculis* L. being the only one of the two properly belonging in the Rutaceae has generally been regarded as type, and I accepted this, it now seems erroneously.

After the publication of the above article, J. C. Verdoorn, of the Division of Botany, Pretoria, Union of South Africa, sent to the International Bureau a copy of a letter dated June 12, 1940, from the late T. A. Sprague to E. P. Phillips, indicating that the type of *Zanthoxylum* L. was really *Zanthoxylum americanum* Mill., published 15 years later. Verdoorn asked if this viewpoint had ever been considered, and if so why it was not acceptable. The inquiry was referred to me as the member of the Phanerogam Committee who had handled the proposal to conserve *Xanthoxylum* Mill. which had led to the publication of the above article. This led to an exhaustive effort to dig out all facts that could have a bearing on the typification of *Zanthoxylum* L., a task which would certainly have been undertaken before if any suggestion had come to me that *Z. clava-herculis* was not properly the type of the genus.

Sprague's contention was that since Linnaeus, in the Genera Plantarum, attributed the name *Zanthoxylum* to Colden and in the description included the words "Cor. nulla", "The description was in fact based on *Aralia arborea aculeata* Cold. which is *Zanthoxylum americanum* Mill. (1768). The type of the generic name *Zanthoxylum* L. is accordingly *Z. americanum* Mill. although that species was apparently not included in Sp. Pl. ed. 1 and did not receive a binary name until 1768. As a matter of fact Linnaeus had erroneously supposed it to be conspecific with *Z. clava-Herculis.*" (Quoted from Sprague's letter).

This suggestion, though introducing an unwelcome further confusion into an already confused situation, required the most critical examination, especially since it came from the dean of modern plant nomenclators. It seems worth while to sketch the entire pre-Linnean history of the name *Zanthoxylum*, as the conclusions presented here may not be accepted without argument in all quarters. They were not accepted readily by me, but after lengthy re-examination they seem inescapable.

Zanthoxylum was apparently first used by

Plukenet in his Almagestum, p. 396, in 1696. Under it he brings together a miscellaneous lot of plants, mostly figured earlier in his Phytographiae, plates 239 and 328, 1692, 1696, and mostly species of what we would now consider *Zanthoxylum* L. (sens. lat.) from Jamaica and Barbados. He adds with doubt Rheede's *An Mouli-illa* from Malabar and his own *"Arbor aculeata, Caroliniana, spinis grandioribus"* (Almagestum p. 43). Plukenet in 1705 (Amalth. 214), narrowed the concept down, indicating his earlier Tab. 239 fig. 4, as the plant he had in mind and specifically excluding his Tab. 328 fig. 6. The plant in Tab. 239 fig. 4 appears to be the modern *Z. clava-herculis* L. or something very close to it, with double perianth.

Catesby, in his Natural History of Carolina 1: 26, t. 26, 1731, under his *Zanthoxylum spinosum* .... describes and illustrates what seems certainly to be the modern *Z. clava-herculis*, from the island of Jamaica.

Linnaeus' treatment in the Hortus Cliffortianus 487, 1737, may be quoted in full:
"Zanthoxylum.
Zanthoxylum spinosum, lentisci longioribus foliis, evonymi fructu capsulari, ex insula jamaicensi. Catesb. ornith. 26. t. 26.
Zanthoxylum americanum seu Hercules arbor aculeata major, juglandis foliis alternis. Pluk. alm. 396? amalth. 214?
Arbor aculeata caroliniana, spinis grandioribus crebris tuberculis innascens, cortice urens. Pluk. ahn. 43.
Arbor spinosa virginiana, caudice & ramis lanigerae spinosae malabaricae similis, an Herculis clava. Raj. hist. 1800?
Crescit in Virginia & Carolina.
Arbor foliis est pinnatis: foliolis ovato-lanceolatis, oppositis, parum retrorsum falcatis, obsolete serratis, fere sessilibus, acuminatis, emarginatis. Petiolus communis aculeis parvis acerosis armatus, horum aculei, qui foliolorum insertionibus propiores sunt majores, aculei vero in caule subulati, nullo tuberculo insidentes (in nostra quae vix annum superavit), nec cartilagine muniti. In planta sicca vero est Perianthium parvum, quinquefidum, coloratum; corolla pentapetala, subglobosa: petalis ovato-oblongis. Filamenta quinque, subulata, longitudine corollae. Antherae subrotundae. Germen subrotundum, semibifidum. Styli duo, breves. Stigmata capitata, conniventia, an itaque Staphylaeae Species?"

The next significant reference is *Aralia arborea aculeata* Colden, C. Plantae Coldenghanianum ...., Acta R. Soc. Scient. Upsal. Ann. 1743: 107-108, 1749, which again may be quoted in full, as it is the basis for the typification of the genus and is in a publication not present in most botanical libraries.

"68. Aralia arborea aculeata. Linn. virid. 26. Gron. virg. 34.
Nostratibus Prickly-Ash, vel Tooth-ach tree.
Frutex.
Cal. Perianthium hexaphyllum, foliolis ovalibus, margine coloratis.
Cor. nulla.
Stam. Filamenta sex. Antherae didymae, sulcatae, magnae.
Pist. Germina quatuor, ad basin pedunculo unita. Styli totidem, ex lateribus prodeuntes, & versus centrum floris versi. Stigmata obtusa.
Per.)
Sem.) Abortierunt.
Caulis & Ramuli aculeis compressis, triangularibus, acutis armati.
Folia pinnata, impari costam terminante. Pinnulae ovales petiolo brevi costae adhaerantes.

Flores parvi, herbacei, fere sessiles, pedunculis brevissimis super superficiem ramulorum in acervis sparsi crescunt, & folia antevertunt.

Obs. Numerus staminum incertus, in quibusdam floribus ejusdem plantae septum, in pluribus solummodo quinque, sed in plerisque sex observavi. Nec numerus germinum certus; in aliquibus duo, in pluribus tria, sed in plurimis quatuor. In aliquibus eriam semptem folia perianthii.

Cortex hujus gustu servidus & Decoctum ejus ab indigenis ad Hydropem & Morbos Rheumaticos usurpatur, & eorum exemplo ab Incolis; est insigne sudoriferum."

Linnaeus in Diss. Bot. Nova Plantarum Genera ...., Leonhard Joh. Chenon, 1751 gives a fairly full treatment of "1084 Zanthoxylum. Hort. Cliff. Cold." in which he includes characters from both the Hortus Cliffortianus treatment and that of Colden, giving both the Catesby and Colden references under his [species?] no. "1. Zanthoxylum Hort. Cliff. 487."

In the Genera Plantarum, ed. 5, 130, 1754, however, Linnaeus ascribes the genus solely to Colden, and the characters given in his description seem to be mostly those applying to the plant described by Colden, that commonly known as *Z. americanum* Mill. The Genera Plantarum treatment may be quoted in full, also.

"335. Zanthoxylum. Colden.
Cal. Perianthium quinquepartitum: foliis ovalibus, coloratis.
Cor. nulla.
Stam. Filamenta quinque (4-6). Antherae didymae, sulcatae.
Pist. Germina tria, (4-5), basi pedicello unita. Styli laterales, apice convergentes. Stigmata obtusa.
Per. Capsulae numero germinum, convergentes in globum pedicellatum.
Sem. Solitaria, protuberantia.
Obs. Numerus multum in hoc genere variat. Plurima suadent Dioeciam arboris."

This description does seem to be based on more information than that given by Colden, but seems to apply almost perfectly to the plant described by Colden.

The fact that in his later works Linnaeus restored the Hortus Cliffortianus element does not seem to have a bearing on the typification. The genus, as published in a valid sense for modern nomenclature, is ascribed to Colden and refers only to the plant described by Colden, which should therefore be considered the type. Thus the type is *Aralia arborea aculeata* Colden, which, both from the characters given and from the fact that it came from New York, can only be the northern plant with a single perianth whorl. As pointed out in Taxon 7(4): 95, 1958, the earliest available name for this is *Zanthozylum fraxineum* Willd. (1805). The fact that Linnaeus places *Aralia arborea aculeata* in synonymy under *Zanthoxylum* and tacitly under *Z. clava-herculis* L. (actually under *Z. clava-herculis* in a later publication, Amoen. Acad. 3: 16, 1756) does not hinder us from accepting it as the type of the genus, though it would have simplified matters a great deal if he had listed it as an accepted species in the first edition of the Species Plantarum.

Thus, contrary to my statement in Taxon 7(4): 96, 1958, the situation regarding the names *Zanthoxylum* and *Fagara* is as follows: For those who combine the genera with one and two perianth whorls the correct name is *Zanthoxylum* L. For those who separate them the tropical genus with two whorls has the correct name *Fagara* L. (nomen conservandum) with *F. pterota* L. as type and the temperate genus with one perianth whorl still bears the name *Zanthoxylum* L. typified by the plant now called *Z. fraxineum* Willd. *Thylax* Raf. falls back into the synonymy of *Zanthoxylum* L. No further conservation is necessary.

NEWS AND NOTES

ORTHOGRAPHY

In Taxon 7: 269. 1958, I remarked that the compound epithets in *Botryobasidium 'heteronemum'* and *Acytostelium 'leptosomum'* should be regarded as orthographic errors and corrected to *'heteronema'* and *'leptosoma'*, respectively (i.e., from adjectives to nouns in apposition).

I now recall that there is a long-established precedent in botany for the coining of compound adjectives of this sort, though I cannot think of a precedent for the derivation of the adjectives *'-nemus, nema, nemum'* and *'-somus, soma, somum'* from the neuter substantives *'nema'* and *'soma'*.

Example. *Fusarium heteronema* Berkeley & Broome, 1865, was altered by Saccardo (*Sylloge Fungorum* 4: 712, 1886) to *'Fusarium heteronemum'*.

Epithets such as *'longifoli-us, -a, -um'* were used by Linnaeus and probably at a very much earlier date; and *'longifolius'* is itself a compound adjective derived from the neuter noun *folium*. Similar coined compound adjectives of later origin, now well-accepted in botanical literature, are (in the masculine gender) *heterosporus, heterospermus, longisetus, pachycladus, pachytrichus, hyalopodus*. It would have been at least equally correct for the original author to have published these epithets as nouns in apposition and, in fact, such epithets as *'longiseta'* have usually started in a feminine genus where the author may have equally well intended it to be a compound noun in apposition as a coined adjective.

It is pertinent to note that *Uredo cyclostoma* Léveillé, 1846, in the feminine genus *Uredo*, was transferred to the neuter genus *Caeoma* by Hariot in 1891 as *Caeoma cyclostoma* (Lév.) Hariot, the epithet being regarded by Hariot as a noun in apposition.

I would therefore suggest that, in the case of *compound* epithets of this kind, the original author is entitled to coin an adjectival form or, if he prefers, may use the epithet as a noun in apposition. To prevent

future confusion, it would be advisable for him to indicate his intention. If no indication is given, and the epithet could be taken in either sense, a later author may, at his option, treat the epithet as a noun in apposition or as an adjective and this treatment should be followed by subsequent authors. The adjectival and the substantival forms would be treated as orthographic variants: i.e., would be homonyms. Thus, it would have been correct for Raper to have published his species as *Acytostelium leptosma*, but it was allowable for him to coin the 'brand-new' compound adjective *'leptosomus, -a, -um'*, as he did.

There is, on the other hand, no precedent for transferring simple latin nouns such as *'gladiolus'* and *'umbraculum'* into adjectives: to do so is quite contrary to accepted usage.

In phanerogamic botany, the use of such adjectival epithets as *'quercifolius'*, meaning 'possessing *Quercus*-like leaves', is not uncommon and is of long standing. Unfortunately, several mycologists have used the epithet *'quercifolius'* to mean a fungus 'inhabiting *Quercus* leaves'. In order to discourage the use of this sort of epithet in this sense, attention needs calling to the fact that this is not the correct meaning of *'quercifolius'*; and there is an unexceptionable alternative available of using the compound epithet *'querci-folii'* (cfr. *Mycosphaerella psammae* (Rost.) Lind. var. *elymi-floris* Munk, 1957).

F. C. Deighton

NEW COMBINATIONS IN MOSSES III

Atrichum speciosum (Hor.) Wijk et Marg.
Basionym: *Catharinea speciosa* Hor., J. Jap. Bot. 12: 670. *12*. 1936.

Bryum pseudotriquetrum (Hedw.) Schwaegr. var. *algeriense* (Corb.) Wijk et Marg.
Basionym: *Bryum ventricosum* Relh. var. *algeriense* Corb., Compt. Rend. Ass. Fr. Avanc. Sc. 34: 485. 1906.

Desmatodon convolutus (Brid.) Grout var. *gasilieni* (Vent.) Wijk et Marg.
Basionym: *Desmatodon gasilieni* Vent., Rev. Bryol. 21: 75. 1894.

Drepanophyllum falcifolium (Schwaegr.) Wijk et Marg.
Basionym: *Fissidens falcifolius* Schwaegr., Spec. Musc. Suppl. 1(2): 9. 1816.

Entodon hypnoides (Besch.) Wijk et Marg.
Basionym: *Rhegmatodon hypnoides* Besch., Mem. Soc. Sc. Nat. Cherbourg 16: 232. 1872.

Fissidens bryoides Hedw. var. *crispulus* (Brid.) Wijk et Marg.
Basionym: *Fissidens crispulus* Brid., Mant. Musc. 187. 1819.

Fissidens sylvaticus Griff. ssp. *aculeatus* (Fleisch.) Wijk et Marg.
Basionym: *Fissidens zippelianus* Doz. et Molk. ssp. *aculeatus* Fleisch., Musci Fl. Buitenzorg 1: 46. 1904.

Fissidens sylvaticus Griff. var. *irroratus* (Fleisch.) Wijk et Marg.
Basionym: *Fissidens zippelianus* Doz. et Molk. var. *irroratus* Fleisch., Musci Fl. Buitenzorg 1: 45. 1904.

Fissidens sylvaticus Griff. ssp. *savellii* (Ren. et Card.) Wijk et Marg.
Basionym: *Fissidens savellii* Ren. et Card., Rev. Bryol. 29: 2. 1902.

Fissidens taylorii C. Muell. var. *floribundus* (Wils.) Wijk et Marg.
Basionym: *Fissidens brevifolius* Hook. f. et Wils. var. *floribundus* Wils. *in* Hook. f., Fl. Tasm. 2: 167. 1860.

Grimmia trichophylla Grev. var. *tenuis* (Wahlenb.) Wijk et Marg.
Basionym: *Campylopus pulvinatus* (Hedw.) Brid. var. *tenuis* Wahlenb., Fl. Suec. 2: 748. 1826.

Mnium longirostre Brid. var. *rhynchophorum* (Hook.) Wijk et Marg.
Basionym: *Mnium rhynchophorum* Hook., Icon. Pl. Rar. 1: *20 f.* 3. 1836.

Oreoweisia torquescens (Brid.) Wijk et Marg.
Basionym: *Weisia torquescens* Brid., Bryol. Univ. 1: 349. 1826.

Pohlia cruda (Hedw.) Lindb. var. *subglobosa* (Schimp.) Wijk et Marg.
Basionym: *Webera cruda* (Hedw.) Schwaegr. var. *subglobosa* Schimp., Coroll. 65. 1856.

Pottia lanceolata (Hedw.) C. Muell. var. *rigidior* (Schwaegr.) Wijk et Marg.
Basionym: *Encalypta lanceolata* Hedw. var. *rigidior* Schwaegr., Spec. Musc. Suppl. 1(1): 61. 1811.

Pylaisiobryum abyssinicum (C. Muell.) Wijk et Marg.
Basionym: *Neckera abyssinica* C. Muell., Syn. 2: 71. 1851.

Sphaerothecium phascoides (Hamp.) Hamp. var. *elatius* (Hamp.) Wijk et Marg.
Basionym: *Sphaerothecium comosum* Hamp. var. *elatius* Hamp., Ann. Sc. Nat. Bot. ser. 5, 3: 361. 1865.

R. van der Wijk et W. D. Margadant

THE GENERIC NAME RESTIO

In 1767 the two generic names *Restio* and *Thamnochortus* were published by Linnaeus and Bergius respectively, for monotypic genera. *Thamnochortus*, with *T. fruticosus* Bergius (Pl. Cap. 353. t. 5, fig. 8) was published in September and *Restio*, with *R. dichotomus* Linnaeus (Syst. Nat. ed. 12. 2: 735), in November. It was early found that these two were taxonomically identical, and in all major works of the last century and a half they have been united under the name *Thamnochortus fruticosus*. This is clearly correct under the International Code; it is equally clear that the generic name *Restio* Linnaeus is a taxonomic synonym of *Thamnochortus* Bergius.

Nevertheless, *Restio* has remained in use and some ninety species from South Africa and thirty or more from Australia are referred to it at the present time, whilst it is from the genus *Restio* in this nomenclaturally incorrect sense that the family name *Restionaceae* is derived.

Even if one of the later synonyms — *Rhodocoma* Nees (1836), *Ischyrolepis* Steudel (1855), *Craspedolepis* Steudel (1855) — were substituted for "*Restio* auctt. non Linn." a large number of new combinations would be necessary and it is therefore desirable to conserve the name *Restio* from a date early enough to include all the binomials published under it.

The second author to use the name was Rottböll (1772, 1773); he gave a new description of the genus and referred to it several species, three of which have been retained in it up to the present time. These are *R. triticeus* Rottb., *R. triflorus* Rottb. and *R. compressus* Rottb. Any of these is acceptable as lectotype of the generic name, but since it appears to be somewhat better known and more widely distributed than the others, I nominate *R. triticeus*.

The relevant references to the literature of the South African species have been given by Pillans (Trans. Roy. Soc. S. Afr. 16: 210. 1930) as well as to the literature of the generic name, and they need not be repeated here. The above proposal may be stated briefly:

Restio *Rottböll*, Descr. Pl. Rar. Programm. 9 (1772), et Descr. Ic. Rar. Liber 1: 2 (1773), nom. cons. prop., non Linnaeus, Syst. Nat. ed. 12. 2: 735 (Nov. 1767), nom. rejic. prop.

R. triticeus *Rottböll, l.c.* 11 (1772), et *l.c.* 7. *t.* 3, *fig. 1* (1773); Pillans, Trans. Roy. Soc. S. Afr. 16: 226. 1930 — *Lectotypus nominis generici.*

It may be objected that the synonymy of *Restio* and *Thamnochortus* persists, since Rottböll retained *R. dichotomus* in his conception of the genus, and that *Restio* should be conserved from the first author who excluded the Linnaean species. Such a procedure, however, would render many of the earlier combinations under *Restio* useless and it seems preferable to regard Rottböll's description as a new one and to typify the name from among the species which he included.

A. A. Bullock

AMERICAN SOCIETY OF PLANT TAXONOMISTS

The officers of the American Society of Plant Taxonomists for 1959 are Dr. W. C. Steere, Director of the New York Botanical Garden, President; Dr. A. C. Smith, Director of the Museum of Natural History, U.S. National Museum, Chairman of the Council; Dr. C. Ritchie Bell, University of North Carolina, Secretary; Dr. Charles B. Heiser, Jr., Indiana University, Treasurer; and Dr. Rogers McVaugh, University of Michigan, Editor-in-Chief of the Society publication BRITTONIA. Although Dr. H. W. Rickett is retiring as Editor-in-Chief of BRITTONIA, he will remain Managing Editor of the journal. Dr. Warren H. Wagner. University of Michigan, has been elected to the Council of the American Society of Plant Taxonomists for a seven-year term.

The Constitution of the American Society of Plant Taxonomists has recently been revised to add a membership category for retired members. Also a new By-Law adopted at the national meetings established a new class of student membership, with reduced dues ($ 4.50).

The Cooley Award for the best paper on the southeastern flora published during the calendar year 1957 was made to Dr. James W. Hardin ("A Revision of the American Hippocastanaceae", *Brittonia* 9: 145-171, 173-195. 1957). The Cooley Award for the outstanding paper presented before a session of the American Society of Plant Taxonomists at Bloomington went to Dr. Richard A. Howard ("Vascular Anatomy of the Petiole as a Taxonomic Character"). The recipients

received their awards at the ASPT and Botanical Society dinners at Bloomington. The ASPT is able to make these awards through the generosity of one of its members, George R. Cooley.

NATIONAL SCIENCE FOUNDATION

The Division of Biological and Medical Sciences of the National Science Foundation announces that the next closing date for receipt of basic research proposals in the life sciences is May 15, 1959. Proposals received prior to that date will be reviewed at the summer meetings of the Foundation's advisory panels and disposition will be made approximately four months following the closing date. Proposals received after the May 15, 1959, closing date will be reviewed following the fall closing date of September 15, 1959.

Inquiries should be addressed to the National Science Foundation, Washington 25, D.C.

TYPE COLLECTIONS OF ALGAE

Corrections and additions

Drouet, F. Las Vegas, New Mexico, U.S.A., New Mexico Highlands Univ., Dept. of Biology (private collection).

Harvey, W. H. (1811-1866) Dublin, Dep. of Bot., Trinity College (TCD); London, Brit. Mus. (BM); Kew, Roy. Bot. Gard. (K); Melbourne, Nat. Herb. (MEL).

Kützing, F. T. (1807-1893) Leiden, Netherlands, Rijksherb. (L); London, Brit. Mus. (BM) (*Diatomeae*).

M'Calla, W. Dublin, Nat. Mus. (DBN).

Pocock, M. A., Grahamstown, S. Africa, 18 Milnes Street (private collection).

J. Th. Koster

PERSONALIA

Dr. Robert E. Woodson, Professor of Botany, Washington University, has been appointed Curator of the herbarium of the Missouri Botanical Garden, Saint Louis 10, Missouri, Illinois, U.S.A.

Mr. E. Nelmes of the Herbarium, Royal Botanic Gardens, Kew, died on 5 February of this year after a long and increasingly severe illness. A short appreciation of Mr. Nelmes and his work will be given in a forthcoming issue of Taxon.

Dr. Dalvo Mattos de Decca, Director of the division of botany of the Instituto Agronômico at Campinas, Saõ Paulo, Brazil, died on 14 November 1958.

DONATION TO I.A.P.T.

The Kennicott Club of Chicago, an association of professional biologists has again made a donation of $ 25.— toward the publication of the journal Taxon.

The Executive Committee of the I.A.P.T. has gratefully accepted this donation and expressed its high appreciation of this sympathetic gesture.

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"Taxon" is directed by: Prof. J. Lanjouw, Chief Editor, and Dr. F. A. Stafleu, Assistant Editor. All correspondence should be sent to the International Bureau for Plant Taxonomy and Nomenclature, 106 Lange Nieuwstraat, Utrecht — Netherlands.

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PRELIMINARY OPINIONS CONCERNING NOMENCLATURE PROPOSALS*

AVANT-PROPOS**

Amis de la Nature, écoutez votre Loi,
Lisez avec grand soin ces articles de foi,
Respectez-les toujours et suivez-les sans cesse,
Appliquez leur rigueur sans la moindre faiblesse.
Ainsi, vous parviendrez à l'heureux résultat
De recenser le monde en son parfait état.
Si, même, certain point n'avait l'heur de vous plaire,
Son bon sens vous suivrez sans mauvais caractère,
Car c'est par un fidèle usage de la loi
Que des nomenclateurs chacun sera le roi.
Mais si sur quelque article existe l'injustice,
Un manque de logique ou qu'une erreur se glisse,
Avec force vigueur, employez-vous alors
A corriger la règle et redresser les torts.
Pour qu'on suive une loi sans rancoeur, ni contrainte,
Il faut qu'aux droits acquis elle ne porte atteinte,
Qu'elle s'impose à tous par bon sens et clarté,
La force lui viendra de sa simplicité.

ENVOI

Savants, si vous tenez à ce que la science
Qui retient votre amour et votre confiance,
Sur des chemins très clairs progresse sans détours,
Auteurs, si vous voulez que vos oeuvres toujours
Gardent dans l'avenir un intérêt pratique,
Et vous, nomenclateurs, que la Systématique,
Bien comprise de tous, admise sans erreur
Conserve à tout jamais sa réelle valeur,
Vous tous qui travaillez sur les fleurs et les bêtes
Dont les jours de travail sont de vrais jours de fêtes,
Vous, les officiels, et vous, les amateurs,
Qui de la vérité vous faites défenseurs,
Acceptez notre règle, appliquez sa logique
Et suivez de bon coeur notre loi magnifique!

PIERRE BONNET

* Submitted to the Ninth International Botanical Congress, Montreal 1959.

** Abstracts from: PIERRE BONNET, De la nomenclature en sciences naturelles, Essai poétique, Toulouse, Les Frères Douladoure, 39 Rue Saint-Rome, 1948.

COMMONWEALTH MYCOLOGICAL INSTITUTE
25 MAY 1959

PREFACE

In this number of Taxon we publish the result of the preliminary mail vote on the proposals on botanical nomenclature submitted to the IXth International Botanical Congress to be held at Montreal this summer.

The total number of votes was 241 (on April, 7th), but as usual not one of the proposals obtained a maximum vote. In many cases the votes were accompanied by additional remarks and in some instances these were put in such a shape that they can now be published in this series of "Preliminary opinions".

I should like to point out the perhaps rather obvious fact that the full documentation given by the proposers to support their proposals as published in the "Synopsis" can be found in nearly all instances in the various numbers of Taxon to which reference is made in that book. It is necessary to say this because one or two correspondents have protested against the principle of the rapporteur's comments, saying that the other point of view is not given fair publicity. The point of view of the proposer is always found in his original proposal and in each case the original proposal has been published in full.

Apart from this argument however, a few correspondents hold that no comments by the rapporteur are needed at all. If this is the feeling of more of our colleagues it would be well to discuss this item at the sessions in Montreal. The main reason why this system was adopted by Briquet and followed by Sprague and myself is that the number of proposals is so large and the proportion of purely technical ones is so high that it seems advantageous to have some preliminary comment helping those who are perhaps less well acquainted with the intricacies of the Code to find their way. This preliminary comment could perhaps also be given by a small committee as was the case for part of the proposals submitted to the three previous congresses. However, it is difficult to choose such a committee and its composition will always be open to criticism. A further disadvantage of such a committee is that it entails much additional administrative work as well as funds to convene a meeting. This is all very time-consuming and it is questionable, in my opinion, whether at this stage the number of really important proposals would warrant this extra work and expense. On the contrary, there are only a few proposals now that are of real importance and for those every opportunity for preliminary discussion has been provided by Taxon.

It has been said that the rapporteur's comments influence the preliminary vote. This may be true for proposals of a purely technical nature, e.g. when the comment is to refer them to some committee. For proposals of real importance, however, I do not believe that those who vote slavishly follow my advice. I trust that every voter either votes after adequate study or abstains from voting. Furthermore, this preliminary vote is only a guiding vote and is not binding. The Nomenclature Section at Montreal will again decide in each instance whether further discussion is needed or not. I may perhaps repeat what I wrote in June 1954 in the introduction to the preliminary opinions for the Paris Congress "In many instances it [the preliminary vote] will facilitate a decision, especially when the voters have clearly expressed their mind to retain the original text. However, in those cases where questions of fundamental importance are involved, I feel bound to warn against decisions that would rest on an undue confidence in the value of the preliminary vote".

Finally I should like to explain why the number of votes is so much lower now (241) than in 1954 (315). This is because the Paris Congress decided not to give a preliminary vote to the institutes referred to in provision 4B (2) of Division III of the Code (p. 51). We have sent grey voting forms to the institutes in order to enable them to put their vote on record and in order to be able to supplement the

result of the preliminary vote if this would be asked for by the Section at Montreal. The result published in this number of Taxon, however, is based solely on the white forms sent in by individual botanists. This Paris decision is reported in Taxon 4: 165. 1955 where it is stated that item 4A (b) was rejected, this item being the right of the institutes to take part in the preliminary vote.

J. Lanjouw

NOTES ON SOME NOMENCLATURAL PROPOSALS BEFORE THE MONTREAL (1959) CONGRESS

A. A. BULLOCK (Kew)

1. In Taxon 6: 188-194 (1957), E. J. Little has made three propositions, none of which, it is to be hoped, will prove acceptable to the Montreal (1959) Congress.

The principle of *nomina specifica conservanda* has been rejected so many times that even in the attenuated form of *epitheta specifica conservanda* it is unlikely that the idea can win majority support. The proposal involves the setting up of a committee to examine, report and vote upon each individual case, and since conservation (as opposed to rejection) requires typification, the necessary procedure is not quite so simple as Dr. Little seems to imagine. The only available comparative procedure is that for conservation of generic names. I believe that Dr. Little has never served on any of the committees dealing with these, but he may be assured that even the "detailed statement" presented by proposers is rarely accepted by the committee without considerable cross checking and further research. The 1954 committee for *Spermatophyta*, led by Dr. Rickett, has already dealt with 120 pages of reports, comments, etc. and the individual members have considerable sheaves of correspondence. Part of the result is shown in Taxon 7: 184-193 (1958).

It is by no means certain that the conservation of specific epithets would lead to a greater degree of stability than would rejection of specific names. Dr. Little brands the latter as a negative method which does not "settle the nomenclature" of any species. It is equally clear that conservation of specific epithets is at least partially negative in that although it would be effective against all homonyms, it could not be effective against synonyms *that are not yet known*. Further objections to *epitheta conservanda* have been given convincingly by Maria Buchinger (Taxon 6: 195-197. 1958). The consequent proposal is, however, too subjective to lead to stability, whilst its retroactive effect would be disastrous.

Dr. Little's definitive proposal is also contrary to the general principles of the Code, in that it seeks to control names whatever classification may be adopted. It represents a partial return to a circumscription, as opposed to a type, method.

The rejection of names "more than fifty years old . . ." is unrealistic. Who is to establish the fact? Further, works on remote regions may well be separated by periods of more than fifty years and to reject names used in an earlier work merely because no one had any occasion for using them during such a period would be nonsensical. Dr. Little's proposal, which employs the term "effective publication"* in a manner contrary to the definition of Art. 29 would, if adopted, lead to chaos.

Little's third proposition, although it refers only to *Spermatophyta*, is equally

* "Effective publication" refers to the printed matter itself, and is only one of several conditions regulating the valid publication of the names contained in it.

unacceptable. Every care is taken by the compilers of the *Index Kewensis* to make that work as complete and accurate as possible; but to make inclusion in it a condition of valid publication is not a practical proposition.

2. Rickett and Camp (Taxon 4: 37-40. 1955) have made a notable contribution towards stating the difficulties surrounding the goal of nomenclatural stability, but it is clear that the retroactive effect of their proposed new article (p. 39), and also the absence of any definition of "accepted name" will ensure its rejection at Montreal. Except when only a single specimen was cited, few authors before 1930 designated a holotype; for a large number of names the type is in fact the description itself, whilst an "accepted name" is surely any name that is legitimate and validly published, though not necessarily correct in the classification adopted at any particular time. ** The Code cannot legislate concerning taxonomic acceptance of species, which, unlike their names, depend upon circumscriptions, not types.

3. The modifications proposed by Buchheim (Taxon 6: 224-7. 1957) were in fact used by me in the compilation of my list of family names (Taxon 7: 1-35, 158-163. 1958), when I found it desirable to make for myself a number of "rules" which, if not always contrary to the Code, at least were not included in it. It is clear that modifications are required for names of taxa above the rank of genus and those proposed by Buchheim are reasonable and logical.

4. The proposed additional Note to Art. 14, presented by Traub, (Taxon 6: 239-240. 1957) shows a lamentable lack of information as to the procedure that is in fact adopted by all Congresses. Most of the proposals falling within the ambit of his remarks are to some extent controversial, since otherwise there would be no need for a committee to express its views, or for Congress to make a decision. For example, Dr. Traub's proposal will itself require a two-thirds majority at Montreal to find a place in the Code and the conservation of a generic name — or other modification of Appendix III — requires a majority of the order of 7-3 when the committee includes ten members, or 6-2 with eight members. Such majorities are surely sufficient to ensure impartial judgement, unlikely to be modified by a further committee unless massive new evidence comes to light. The procedure proposed in any event would be impracticable; it is sufficiently difficult to obtain the necessary number of people to serve on the present committees without the further burden of what would amount to a court of appeal. It is necessary always to remember that the Code is not a Code of Law or of Justice, but merely a code of expediency to which botanists subscribe for their own convenience. The Code has a legalistic approach and style in order to avoid ambiguity and to give guidance. Clearly, if any part of the Code proves to be inconvenient or unpractical (as, for example, Art. 65) a move for amendment or deletion must be made. Article 65 is a relic of the circumscription method, whereas the Code is now avowedly based upon the type method (see St. John, Taxon 6: 198. 1957).

5. De Wit's proposal (Taxon 5: 4-7. 1956) to add a definition of the term *nomen nudum* and also a new recommendation to the Code seems to be quite unnecessary. It is also undesirable, since it implies that, contrary to Art. 12 (Art. 22 of the Stockholm, 1952, Code), *nomina nuda* have claim to recognition. Further, De Wit's definition excludes all those manuscript names which are usually included in the term.

De Wit's paper also introduces a completely new idea. The concept of legitimacy, in the jargon of botanical nomenclature, refers only to validly published names;

** For example, see Bullock and Harrison, Kew Bull. 1958: 52 (1958).

to extend it to *nomina nuda* is an unnecessary complication. Part of the confusion claimed to exist by De Wit may have been dispelled by the changed wording of Rec. 54D of the Stockholm Code, which is Rec. 45C of the Paris Code and reads "Authors should avoid adoption of a name or an epithet which has been previously but not validly published for a different taxon". The emphasis is on lack of valid publication.

Of course, everyone has been confronted with names to which the term *nomen subnudum* might be applied, and this has nothing to do with the length of the descriptive text attached to the name. It is quite clear, as it was clear to Linnaeus (Crit. Bot., Aphor. 257) that it is the diagnostic value of the text that is important, but De Wit's note and recommendation will not give users of the Code any guidance on this matter and would indeed introduce another aspect of nomenclature requiring majority opinion for final settlement.

6. Rickett's note (Taxon 7: 38. 1958) on dates of publication is interesting but surely the date of publication cannot be accepted as the date on which the printed matter left the printer's hands. Usually, in the United Kingdom at least, printers deliver the printed matter to the publisher and it is the latter who is held responsible for the actual distribution and for the date of release. Sometimes delivery from the printer and release to the public are carried out in one operation, but responsibility still rests upon the publisher. In any event the precision suggested by Rickett's note would scarcely help in the actual determination of dates of publication in cases which have always involved protracted bibliographic research; certainly the date of leaving the printer's hands might be completely wrong. * On the whole, I believe that the intention of Art. 29 is sufficiently clear; greater precision may be possible but it would be necessary to limit it to the future. And it is the older publications which give most trouble in this respect.

NEOTYPE vs TYPIFICATION BY DESCRIPTION OR FIGURE

M. HOSSAIN (Edinburgh)

The present Code ** embodies two different and ambiguous provisions for the typification of a specific name lacking a type or any other original specimen. If, in the case of such a specific name, a description or figure can be a type (cf. Note under Art. 10), there hardly remains a case for choosing a *neotype*, also provided for in Note 3 under Art. 7. Bullock & Ross (cf. Proposal No. 155 in Taxon, 7(9): 258. 1958) have already pointed out this anomaly and, to correct it, have proposed the abolition of the provisions for choosing a *neotype* altogether. The writer, however, finds himself in disagreement with this proposal, and considers that the nomenclatural type of a species or of an infraspecific taxon should always be a specimen (s.l.) and not a description or figure (excepting only those cases in which it is impossible to preserve a type specimen), and that for a name of a species or of an infraspecific taxon without a type or any other original specimen a *neotype* should be chosen.

* Books are frequently received for review marked "To be published on ....", giving a future date and requesting that no review should appear before that date. Clearly such limited distribution to reviewers cannot count as effective publication in the sense of the Code.

** International Code of Botanical Nomenclature, 1956.

It should be emphasised here that the utmost care must be taken in choosing a *neotype*, and that the guide in this respect must always be the original description and the figure/s, if any, cited therein. It is strongly recommended that typification by a *neotype* should be accompanied by a comprehensive account of the case. The arguments in support of the above views are stated below:

Any provision for typification by a *neotype* or description or figure is apt to find its application mainly in the case of some specific names published in the pre-type-method days. Such names, like some of those used by Linnaeus, are hardly accompanied by an adequate description or a good figure. Even if it is possible to identify the species with such scanty descriptions and seldom-good figures, it is usually not possible to identify a type necessary for infraspecific classification. The case of *Trifolium uniflorum* L. (Sp. Pl. 771. 1753) may be cited as an example. As far as is known, no type or any other original specimen of the name is extant. (The specimen 930 · 50 in Herb. Linn. is interpreted as having reached Linnaeus after 1753). The original description in this case consists of Linnaeus' own phrase-name, Alpini's synonym and figure, and Tournefort's synonym. It is possible to identify the species with the help of this original description. But in Alpini's figure (Alp. Exot. 169. *t. 168*) the corolla appears as hardly longer than the calyx, whereas, in fact, it is usually twice or more as long as the calyx. Nowhere in the rest of the original description is there any reference to the relative lengths of the calyx and the corolla of the specimen Linnaeus used or had in mind while first publishing the name. Similarly, from the original description, there is no way of knowing what were the lengths of the calyx-teeth of that original specimen. Yet these characters (viz. the relative lengths of the calyx and the corolla, and the lengths of the calyx-teeth) constitute the basis of two of the varieties (var. *breviflorum* Boiss.. Fl. Or. 2: 148. 1872 & var. *macrodon* Hausskn., Mitt. Thür. Bot. Ver. ser. 2. 77: 1893) that have been described under this species. A similar example is the case of *T. striatum* L. (Sp. Pl. 770. 1753). Boissier's var. *macrodontum* (Fl. Or. 2: 130. 1872) has been based on the relative lengths of the tube and the teeth of the calyx. But neither in the original description itself, nor in Vaillant's figure cited therein, is there any clue to these features in the original specimen. How, then, is one to judge the nomenclatural position of these varieties (cf. Arts. 26 & 53), if not by reference to a specimen chosen as the type of each specific name concerned?

There is little doubt that for nomenclatural purposes, a specimen (i.e. a *neotype* chosen on the basis of the original description and preferably from the type locality) will have a more stabilising effect than a description or a figure which, however elaborate, is seldom an adequate substitute for a specimen, and which, at least in some cases, is apt to create more confusion than order. If we reject the *neotype*, we reject the chance of choosing a new, unequivocal reference point, with the result that we shall be permanently tied to the ambiguities of the past. Taxonomic progress does not lie in the latter direction.

To remove this anomaly in the existing rules, the following amendments are proposed:

1) Art. 7, Note 3: Insert the following as the fourth paragraph, i.e. after the definition of *lectotype:*

"In the case of the name of a species or of an *infraspecific taxon* [a]), the lectotype must be chosen from the original specimen/s [b])."

Delete the paragraph under 4c, in the "Determination of Types" in Appendix IV.

Comments:

In the case of a supraspecific taxon, a lectotype is not a specimen but is an "other element" as stated in the generalised definition of *lectotype* in the third paragraph. The proposed paragraph is intended to clarify the provisions relevant to the names of species and infraspecific taxa.

a) Taxa below the rank of species are here referred to as infraspecific taxa. There seems to be no reason why the same taxonomic groups should be referred to in the Code in two different ways, e.g. "infraspecific taxa" (cf. Sect. 6 & Art. 24) and "taxa below the rank of species" (cf. Art. 10).

b) The phrase "original specimen/s" stands for specimen/s cited with the original description (e.g. holotype, paratype/s, syntype/s) or believed to be the basis of the original description accompanying the name of a species or of an infraspecific taxon.

2) Art. 7, Note 3, para. 5: To read:

"A *neotype* is a specimen selected to serve as a nomenclatural type of a species or of an infraspecific taxon when neither the holotype nor any other original specimen is extant."

Comments:

The purpose of "for so long as" in the existing definition is covered by Art. 8. The phrase "all of the material" is unnecessarily vague and may, in some cases, mean figure/s.

3) Art. 10, para. 1, line 2: Delete "or other element". Art. 10, Note: To read:

"Only in the case of plants of which it is impossible to preserve a type specimen may the type of a species or of an infraspecific taxon be a description and/or figure.

Comments:

The purpose of this proposal is to abolish the provisions for typification by a description or figure except for exceptional cases. Apart from this, there is a slight inaccuracy in the wording of the existing Note as well as in the Proposal No. 120a by G. M. Schulze and G. Buchheim (Taxon, 7(9): 253. 1958). The type can be for a taxon only and not "for plants" as the wording of the existing Note conveys.

It is realised that it is too late for submitting proposals regarding the International Code of Botanical Nomenclature of 1956. Notwithstanding, the above proposals are put forward with a view to drawing the attention of taxonomists to some important aspects of the present rules regarding typification which, I feel, must be taken into consideration before any final decision is taken at the ensuing International Botanical Congress.

I have discussed the subject of the present communication with my taxonomic colleagues at Edinburgh, particularly Dr. P. H. Davis and Mr. P. S. Green, and am grateful to them for their various suggestions and for authorising me to say that they are in agreement with the proposals put forward above.

SOME REMARKS ON THE PARIS CODE

A. R. Pinto Da Silva (Sacavém, Portugal)

I believe that all those dealing with plant taxonomy have greatly appreciated the real improvement in the International Code of Botanical Nomenclature obtained by the Paris Congress, notwithstanding the fact that the charges do not deal with essentials but mainly with a more formal and logical presentation.

In spite of the excellent work carried out by the Editorial Committee a considerable number of proposals have been submitted to the Ninth International Botanical Congress and it is to be expected that a great number of them will be accepted. This time the proposals again deal mainly with the form rather than with new principles. Certainly this results from the complexity of the adjustment of the text and perhaps also because the Editorial Committee was not so free to act as would have been desirable.

"Principles" being a new division of the Code still did not attain, I believe, its mature form. It seems to me that the following changes and additions would be made.

Principle I — To be reworded as follows:

This Code deals exclusively with the nomenclature of every taxonomic group (phytotaxon, which may be abbreviated as taxon**) of the Plant Kingdom (Regnum Vegetabile).*

The original scope of Principle I in the Paris Code is maintained under this rewording. But under this form the term *taxon* does not remain "monopolised" by botanists as it has been, zoologists and biologists being now free to have in their terminologies *zootaxon* and *biotaxon*. If Principle I is accepted with such wording, Article 1 should be deleted. Article 4 could be reworded in order to omit the words "Regnum Vegetabile", which I would propose in any case, as in a Code dealing *only* with plants it does not seem correct to indicate, as in the Paris Code, "Regnum Vegetabile" as a (the first) "subordinate rank". In all the other Principles and elsewhere in the Code, it will not be necessary to use "taxonomic groups".

Principle II — This would be formed by the Principle IV of the Paris Code reworded as proposed by Silva (*Taxon, 8:* 7) with only some minor changes:

Each taxon with a given (taxonomical) circumscription, position, and rank can bear only one correct name.

In the Paris Code the Principles III and IV have a common part: "priority of publication" and "the earliest" (correct name). This seems unnecessary and obscure. For this reason I would suggest separating the questions concerning the number of correct names (New Principle II) and the first name (New Principle IV).

Principle III — I endorse the new Principle proposed by Silva (*Taxon, 8:* 6) reworded as follows:

Names of taxa have no status under this Code unless they have been validly published.

Principle IV — Principle III in the Paris Code (using "taxa" instead of "taxonomic groups").

Principle V — Principle II of the Paris Code (using "taxa" instead of "taxonomic groups").

Principle VI — I would suggest the following rewording of the text proposed by Silva (*Taxon, 8:* 6):

The names of taxa governed by this Code (i.e., the scientific names of plants) are treated as Latin irrespective of their derivation.

Principle VII — The Principle VI of the Paris Code reworded as follows:

This Code is retrospective in its action and substitutes all the earlier Codes, Laws and Rules dealing with the nomenclature of the Plant Kingdom.

It seems to me advisable to add this Principle. In fact this is not said in any part of the Code.

Principle VIII —

This Code is to be followed by all those who need to use the nomenclature of phytotaxa and it may be modified or replaced only by action of the International Botanical Congress.

If this can indeed be considered as a principle it could support the Division III (Cf. Provision 1).

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*) plural *phytotaxa*.
**) plural *taxa*.

Principle IX — I would include as a new Principle the last paragraph of the Preamble slightly reworded as follows:

In the absence of a relevant rule or where the consequences of Rules are doubtful, established custom is to be followed.

Principle X — I would suggest the inclusion of the following new Principle:

The only acceptable exceptions and limitations to Principles I to IX are those set out in the Rules and Recommendations of this Code.

In the Paris Code there is not always homogeneity in the treatment of the Principles. Some of them present exceptions in their text and for this reason become weakened. Therefore, it seems better, I think, to consider in a separate Principle the possibility of exceptions, some of them indicated in the Paris Code (Principles IV and VI) and others not indicated but existing (Principle III).

* * *

... "this being a matter of typography" (Art. 73, Note 1).

The Code must be purged of such a statement! The use of capital initial letter is by no means a matter of typography neither in modern languages nor in botanical nomenclature. It is not a matter of typography to use a capital initial letter in some English adjectives (as "English", for example) or in German nouns. Grammar, not typography, rules on names such as New York, Germany, Charles or Julia. Even the Code rules the use of capital initial letter (see Recommendation 21 A).

On the other hand it is to be noted that the epithets traditionally written with a capital initial letter were *also* "deliberately adopted by Linnaeus" as were the original spellings given in examples under Art. 73, Note 5. The use in the Code of different criteria when judging Linnean principles of *orthography and grammar*, or when simply ruling on the same matter (compare Rec. 21 A and Art. 73, Note 1) does not seem advisable.

The Code must be coherent also regarding the legitimacy of the use of the hyphen both for names and epithets (compare Art. 23 and Art. 68, (4)).

Another suggestion that I would like to present is to substitute in Recommendation 23 B and elsewhere in the Code the word "pronounce" by "spell". Pronunciation (mainly when concerning Latin words) is not ruled by the Code; it depends, of course, on the people of each country.

In accordance with the accuracy recommended in Recommendation 50 H, I would suggest including some examples of the following type:

Ilex aquifolium ... "*Aquifolium*" (not *aquifolia*)

Sedum rosea ... "*Rosea*" (not *roseum*)

Allium victorialis ... "*Victorialis*" (not *victoriale*)

Schinus molle ... "*Molle*" (not *mollis*)

* * *

A new Appendix consisting of an alphabetical list of the abbreviations and the corresponding author's names would be useful, I think, in order to avoid the use of the same abbreviation for different author's names, and also in order to avoid a well established abbreviation, used by the author himself, being further changed and "occupied" later on by another author.

For example, the abbreviation Henr. first used by Júlio A. Henriques (during ca. 1880-1920) was further used by Henrard and has sometimes been changed to Henriq., this last abbreviation having never been used by the Portuguese botanist.

REPORT OF THE COMMITTEE FOR PALEOBOTANICAL NOMENCLATURE

Some forty-odd proposals affecting paleobotanical nomenclature and four proposals for conservation of generic names of fossil plants have been published in TAXON and referred to this Committee by the Rapporteur-Général. In order to provide a basis for further discussion at the Montreal pre-Congress nomenclature sessions, the Committee's Secretary, S. H. Mamay, circularized among the Committee Members a list of the pro-

posals, along with a ballot and an invitation for their personal comments on the proposals. Members were advised that opinions offered at this time need not be final or binding, but that they would be useful as background material for final deliberations at Montreal.

Eight of the eleven Members contributed to this report. Some offered no comments or discussion but merely indicated their approval or disapproval of the various proposals; other Members discussed some or many of the issues at length, but one discussed all the proposals.

Results of this preliminary poll follow. Where the total of votes is less than eight, the deficiency indicates abstention by one or more of the responding Committee Members. The Secretary has attempted to select from the comments those which most strongly present one side or the other of a particular issue; both supporting and opposing opinions (some translated into English by the Secretary) are quoted where available, and if one or the other is not given here, there was no discussion of that side of the question among the responses that reached the Secretary. Arguments of Committee Members in support of their own personal proposals are not given here, of course, since they accompany the original publication of the proposal.

Art. 7, Prop. C (307 — Potonié, Taxon 8: 18): 4 accept, 2 reject.

Argument for rejection. — "The present note in the Code covers 'organ genera, form genera, genera based on plant microfossils (pollen, spores, etc.).' It is difficult to see how regulations for fossil plants could be made more inclusive. If genera based on spores or pollen are considered organ genera or form genera (and this is inherently a taxonomic decision), it is clear they are covered."

"Proposal C implies, however, that there *are* 'genera of *sporae dispersae*', rather than 'genera *based on* plant microfossils'. Herein lies the important distinction between the names of groups of plants that are subject to regulation under the Code, and designations of organologic entities under artificial systems of classification that are not subject to this Code of nomenclatural regulation."

"The Code applies to names of groups of plants that may be represented, according to regular stipulations, by specimens of any kind. If anyone chooses not to consider them so, the common basis of endeavor, essential for a phyletic systematic treatment contemplated by this Code, is lacking. The *only possible* sense in which fossil specimens of spores, pollens, pinnules, etc. can qualify for consideration under the Code, is when they are regarded as pertaining to a taxon, but it is the *taxon,* and not the organ, which has status under the Code. The Code cannot properly be used for regulation of systems derived primarily on the basis of anatomical or morphological distinctions."

"This proposal is not as satisfactory as the present wording and therefore should be rejected."

Art. 32, Prop. B (109 — Traverse, Taxon 7: 217, and 147 — Hohn, Taxon 7: 256): 5 accept, 2 reject.

Argument for acceptance. — "A change is necessary because insertion of the word 'recent', in anticipation of more extreme changes that were not adopted following the Amsterdam Congress, is evidently a mistake. Effective publication and description has always been recognized practice for valid nomenclature in paleobotany. Proposal B is preferable to Proposal C because it is a slightly simpler and no less direct means of correction than Proposal C."

Argument for rejection. — "It does not agree with PB. 3 and PB 6."

Art. 32, Prop. C (119 — Funkhouser, Taxon 7: 232): 2 accept, 6 reject.

Arguments for rejection. — See arguments for acceptance and rejection of Prop. B, Art. 32.

Art. 34, Prop. B (94 — Mamay, Taxon 7: 224): 6 accept, 2 reject.

Argument for acceptance. — "Exemption of fossil plants from requirement of Latin diagnoses has been in force since 1912, following the Brussels Congress. Proposal B clarifies the present practice and should be strongly recommended for adoption. If a mandatory Latin diagnosis were adopted, it is doubtful that it would be followed. This is best illustrated by the response to a memorandum circulated in 1911 when this question was initially opened for discussion. Every paleobotanist to whom a copy was sent in Britain, United States, and Scandinavia (including Nathorst, Kidston, Halle, Scott, White, Jeffrey, etc.) expressed the intention of (a) avoiding the general use of Latin diagnoses

and, further, (b) recognizing as valid, diagnoses not published in Latin. There has been no indication of a general change in this opinion among paleobotanists since 1911, and every indication that, if this regulation were adopted, it would largely be ignored."

"It is possible to ignore the technical requirement of a Latin diagnosis and still carry on scientific studies of high quality, as indicated by works of American neosystematists who supplied no Latin diagnoses from 1905 to 1935, and whose work was duly acknowledged by the date of this requirement, now set at 1 Jan., 1935. The fact that the Latin diagnosis is not used in zoology further indicates that this technicality may reasonably be dispensed with in modern systematic work. Since all modern studies that provide Latin diagnoses also repeat the substance of the diagnosis in a modern language, and almost invariably provide additional pertinent information, in a modern language, which is not included in Latin, it is evident that requirement of a Latin diagnosis serves *only* as a technicality. There is serious question whether a mere technicality ever serves the true interests of science; it is even more questionable that the introduction of this technicality into paleobotany can in any way be constructive. Illustrations, which were long ago noted as indispensable in paleobotany, and are currently required, have a much more international value than verbal text in any language."

Argument for rejection. — "No, because paleobotanical literature printed in Eastern languages increases more and more and is difficult to understand without Latin diagnoses. A good example for Latin diagnoses is in Dybova and Jachowicz, Warszawa 1957 (Poland)."

Art. 34, Prop. C (95 — Mamay, Taxon 7: 225): 6 accept, 2 reject.

Argument for acceptance. — "Prop. B, Art. 45 (264 — Silva, Taxon 8: 5) proposes deletion of paragraph 3 of Art. 45, largely on the grounds that this removes a loophole for algologists to escape the requirement of a Latin diagnosis. If this proposal is adopted, it makes it of more than casual importance that fossil algae be removed from this requirement in accordance with Prop. C, Art. 34, and Prop. A, Art. 36. Fossil algae are commonly associated with fossil animals, for which no Latin diagnosis has ever been required, and although animal and plant systematics are separate, an effort should be made to minimize formal differences in nomenclature requirements."

"Prop. B under Art. 45 may properly be left for attention of the Committee of Neoalgologists, *providing* Prop. C, Art. 34, and Prop. A, Art. 36, are adopted. Otherwise the question should be referred to a joint special committee for decision."

"Furthermore, deletion of section 3 of Art. 64 as recommended in Prop. B, Art. 64 (280 — Silva, Taxon 8: 11) should be considered by the Paleobotanical Committee since it affects micropaleontology as well as algology, and has a bearing on Prop. C, Art. 34. Dr. Silva believes the name of a plant originally classed as an animal should compete on the same terms with the name of a plant originally classed as a plant. This is sound reasoning, provided the technicality of Latin diagnosis does not prohibit plants classed as animals from receiving normal treatment in priority. Such treatment would be assured if Prop. C is adopted for Art. 34. It is also believed that a taxon originally assigned to the plant kingdom, which is now referred to the animal kingdom, should not cause rejection of a name of a plant. Deletion of Section 3, which implicates the nomenclature of organisms having problematical affinity in matters of their taxonomic history, seems reasonable and may be recommended for adoption. However, the taxonomy of fossil Dinophyceae, Desmidiaceae, and Hystrichosphaeridaceae, probably will be influenced by this deletion."

Art. 34, Prop. D (97 — Cross, et al., Taxon 7: 225): 2 accept, 6 reject.

Argument for acceptance. — See argument for rejection of Prop. B, Art. 34 (94).

Argument for rejection. — "There is little doubt that knowledge of Russian, German, French and English is of more practical value now in paleobotany than knowledge of Latin, which lacks an adequate vocabulary. 'Latin' neologisms, much used in scientific terminology, are not to be confused with classical Latin, and since the Latin used in technical diagnoses is necessarily a scientific vulgate — including a great many newly coined words to cover concepts beyond the needs and imagination of classical scholars — it is fallacious to suggest that Latin offers a superior basis for scientific communication. In no field of science is Latin the principal medium of communication. Papers are not published

in Latin with English summaries — they are not even published with Latin summaries. There are, however, many Russian papers with English summaries, and polylingual summaries in other modern languages are not uncommon. These facts of usage can be verified and should be acknowledged. If one is to acquire international eminence in the field of systematic botany, his time is better spent in study of the modern scientific languages, for in no instance can knowledge of Latin serve as a substitute for reasonable access to available knowledge."

"The proponents of a Latin diagnosis for fossil plants suggest the desirability of uniformity in the requirements for validation of recent and fossil taxa. A more constructive regulation would permit substitution of 'illustration showing essential characters' as an acceptable alternative to a Latin diagnosis in systematic neobotany. Moreover, it would be much more reasonable to have uniformity in this regard throughout the biological sciences. Neither zoological nor bacteriological rules of nomenclature require a Latin diagnosis. Paleobotany is closely allied with zoological paleontology and such an evident divergence between nomenclatural practices of the two fields could be particularly awkward, especially since the Latin diagnosis requirement appears unjustified by any previous experience in either zoological or paleobotanical nomenclature."

"Proponents also suggest that standards of description will be raised by requiring a Latin diagnosis, but the relation of Latin to this desired goal is difficult to comprehend. Latin diagnoses in common use are often extremely brief and hardly bear out the contention that they introduce a descriptional improvement. They duplicate a modern language text, contribute nothing of botanical value, and occupy space that is at a premium and can better be used for other printed matter. In view of the fact that there has never been any formal prohibition against use of Latin in any form, it is significant how few modern scientific papers are actually published in that language."

Art. 35, Prop. A (110 — Traverse, Taxon 7: 229): 5 accept, 2 reject.

Argument for acceptance. — "Proposals A and B differ only as to method in achieving the same objective, i.e., requiring that a nomenclatural type is indicated for fossil plants. It seems simplest to delete the term 'recent' in accordance with Proposal A. This should never have been inserted in the first place, but was, in anticipation of more extensive changes that never became effective, following the Amsterdam Congress of 1935." (One other supporting comment indicated the desirability of a starting date for fossil plants.)

Argument for rejection. — "The adoption of this proposal is contrary to proposals 54 and 116. One should be able to change a generic name that inaccurately indicates affinities."

Art. 35, Prop. B (117 — Funkhouser, Taxon 7: 231): 5 accept, 2 reject.

(Note: Acceptance, by a majority, of both Proposals A and B, certainly indicates that the Committee favors the requirement of nomenclatural types for fossil plants, but apparently is not particular which of the two proposals is adopted to initiate that requirement.)

Arguments for rejection. — See comments, both *pro* and *con,* in regard to Prop. A.

Art. 36, Prop. A (96 — Mamay, Taxon 7: 225): 6 accept, 2 reject.

Argument for acceptance. — "Exclusion of provisions adopted by neoalgologists from application to fossils seems a desirable clarification which should be adopted. In view of Proposal B under Art. 45, and B under Art. 64, it seems particularly advisable to do so." (See comments under Prop. C, Art. 34, of this report.)

Argument for rejection. — See argument for rejection of Prop. B, Art. 34.

Art. 36, Prop. B (98 — Cross, et al., Taxon 7: 226): 6 reject, 2 accept (but only as a recommendation).

Argument for rejection. — "The wording of this proposal, suggesting special requirements in illustration of a 'new taxon of fossil spores or pollen' seems to be based on the misconception that anatomical categories come under purvue of the Code of Botanical Nomenclature. This proposal probably should be considered in relation to one of the artificial systems of classification not covered by the Code. Insofar as illustrations are required in validation of species of infraspecific groups of fossil plants, some of which may be based on specimens of spores or pollen, the proposal seems unnecessary and probably impractical in application. In any event, a special pro-

vision of this nature is unsuitable in relation to an Article, and should, at most, be considered in the form of a recommendation."

Art. 36, Prop. C (102 — Ames, et al., Taxon 7: 226-7): 1 accepts, 1 "prefers 96", 6 reject.

Argument for rejection. — "The proposal should be rejected because provisions of this article have been effective since 1912 and continue to be a most important provision in nomenclature of fossil plants. The conflict with Art. PB. 3 is best resolved by deletion of the PB. article, as recommended in connection with another proposal."

"Current practice was largely based on a different wording which did not imply that categories above the rank of species could be represented by illustration; this remains the only possible sense of interpretation for the article. Prop. D (142 — Schulze and Buchheim, Taxon 7: 256), suggesting the advisability of adding 'of specific or lower rank' overcomes the objection raised by Ames et al. (that taxonomic names for supraspecific categories are invalidated when unaccompanied by a figure) and, therefore, improves the wording. Proposal D should be adopted."

Art. 36, Prop. D (142 — Schulze and Buchheim, Taxon 7: 256): 6 accept.

Argument for acceptance. — See argument for rejection of Prop. C, Art. 36.

Art. 39, Prop. A (111 — Traverse, Taxon 7: 229): 6 accept, 2 reject.

Argument for acceptance. — "Deletion of the word 'recent' is a highly desirable modification, because the exclusion of fossil plants under the Article as it now reads is contrary to practice and common sense. This exclusion of fossil plants was probably inserted by mistake, following the Amsterdam Congress when a more extensive modification of rules for fossil plants than now appears necessary or desirable was anticipated."

Argument for rejection. — See argument for rejection of Prop. B, Art. 32.

Art. 58, Prop. A (103 — Ames, et al., Taxon 7: 227): 6 accept, 2 reject.

Argument for rejection. — "Deletion of the *Steinhauera* example would not appear to be of any significant advantage as far as the status of *Steinhauera* is concerned, but it would remove a useful example from the Code. *Steinhauera* is still available as a generic name for fossils of problematic affinity that are not referable to *Sequoia*. The arguments given for eliminating the example do not seem convincing."

Appendix II, Prop. A (139 — Schulze and Buchheim, Taxon 7: 255): 6 accept, 1 refers to Editorial Committee.

Appendix II, Prop. B (140 — Schulze and Buchheim, Taxon 7: 255): 2 accept, 1 rejects, 4 refer to Editorial Committee.

Comment urging reference of Proposals A and B to Editorial Committee. — "These proposals aim at more effective cross reference between PB. Appendix II and the main body of the Code, and a rearrangement of Articles in the PB. Appendix. It appears impossible to include enough cross references between the Appendix and the rest of the Code, because the material is all so intimately interrelated; any attempt at practical cross referencing is bound to omit one or more items, pertinent in some special instance, whose application to fossil plants is thus needlessly opened to question by its cross reference omission. It would be more desirable to have the Editorial Committee give attention to addition of further cross references wherever they appear to be needed or desirable if a PB. Appendix is to be maintained. The most important omission of a needed cross reference would point out the relation of PB. 1 to Article 3, but this has not been included in Proposal 139."

"Proposal 140 relates to more logical rearrangement of items in the PB. Appendix, many of which have now been proposed for deletion or substantial modification. Consequently, application of this proposal must remain uncertain. Both of these proposals should be recommended for the future attention of the Editorial Committee."

Appendix II, Prop. C (212 — van der Hammen, Taxon 7: 274): 1 accepts, 5 reject.

Argument for rejection. — "This proposal does not seem suitable for addition to the Code. The special artificial system proposed for use in palynology may be useful, but its special advantages over other similar systems are not entirely evident. The various morphologic systems of spore and pollen classification have only auxiliary and informal bearing on plant taxonomy and regular nomenclature. An important distinction depends on whether

systematic work is conducted from the standpoint of plant taxa, or from the standpoint of anatomical entities. The Code of Nomenclature does not attempt to regulate anatomical or morphological terminology."

Art. PB. 1, Prop. A (52 — Arnold, Taxon 7: 156): 3 accept, 3 reject, 2 uncertain (a joint set of comments from two Committee Members included a lengthy but ambiguous comment on this proposal without committal ballot marks. The Secretary is unable to decide whether the comment is intended in support or rejection of this proposal.)

Argument for rejection. — See comments under Prop. B, Art. PB. 1.

Art. PB. 1, Prop. B (104 — Ames et al., Taxon 7: 227): 1 accepts, 5 reject.

Argument for rejection. — "Proposals A and B should be rejected because they sanction use of taxonomic names as anatomical designations. This is only a converse application of the already proscribed usage of morphologic terms for taxonomic names (Art. 68). They definitely invest taxonomic names with orthographic (anatomic) meaning foreign to taxonomy (see Arts. 20 & 23). This is contrary to the purpose of giving names to taxonomic groups (see Preamble), and to the essential spirit of the Code. In order to avoid useless incongruities, difficulties and inconsistencies, taxonomic names should only be used with reference to taxonomic groups of plants."

Art. PB. 1, Prop. C (141 — Schulze and Buchheim, Taxon 7: 157): 3 accept, 4 reject.

Art. PB. 2, Prop. A (55 — Arnold, Taxon 7: 157): 3 accept (2 with suggestion that wording be changed to read "except *all* special provisions"), 4 reject.

Art. PB. 2, Prop. B (118 — Funkhouser, Taxon 7: 232): 1 "prefers 109", 6 accept (1 with suggested modifications).

Suggested modification. — "Should be modified to read 'all provisions of this Code' rather than 'all Articles of this Code' as proposed. With this change the proposal should be adopted. The new wording is an improvement over the present wording, and intent of the Article (to emphasize interdependence of all provisions of the Code, including appendixes, unless specifically excepted) remains the same."

"If the substitution suggested is not made, the provisions of the Preamble, Recommendations, and Appendixes would be technically excluded, and this is undesirable. We would be continuing the same sort of uncertainty which exists now by reference to 'the general rules applicable to naming of recent plants'."

Art. PB. 3, Prop. A (99 — Cross et al., Taxon 7: 226): 3 accept, 4 reject.

Art. PB. 3, Prop. B (105 — Ames et al., Taxon 7: 228): 1 accepts, 1 "prefers 96", 5 reject.

Argument for rejection. — "This should not be antedated. The starting date of 1 Jan., 1953 has been valid till now and a change is not permissible."

Art. PB. 3, Prop. C (112 — Traverse, Taxon 7: 230): 4 accept, 3 reject.

Argument for acceptance. — "This proposal is preferable to proposals 99 and 105, and should be adopted. There is no question that the Article PB. 3 is redundant, since it is less explicit than the first paragraph of the present Article 36. The divergence of dates is only confusing; illustration has been required, *in lieu* of Latin diagnoses, for validation of names of fossil species since 1912. Until the 1952 Code appeared, no distinction as to descriptive requirements (other than Latin diagnoses) was made for fossil plants. Such a distinction seems wholly unnecessary and undesirable if for no other reason than the standpoint of simplification. Exclusion of genera of fossil plants from Article 39, starting in 1952, probably was the result of a mistake. It is hoped the proposals now under consideration, which relate the illustration and description requirement to fossil species under Article 36, and requirements of generic description to all plants under Article 39, will also be approved. Regardless of this, Article PB. 3 represents a superfluous and confusing duplication and should be deleted."

Argument for rejection. — "This would produce great confusion. The Code is a historical document and changes are permissible only when they are absolutely necessary."

New Recommendation PB. 4A, Prop. A (53 — Arnold, Taxon 7: 156): 3 accept, 5 reject.

Argument for rejection. — "This appears to be unnecessary instruction, which should be rejected. The possibilities mentioned concerning fossils were fully considered in preparation of Appendix IV on "Determination of Types" (Code pp. 294-299), much of which has also been incorporated in Article 7. It seemed self-evident that a fossil specimen consists of all fossil plant parts found organically connected. The specimen may be subdivided and each part then represents a slice, fragment, section, mould, counterpart, or other subdivision of *the* specimen. The parts are properly and accurately described or referred to in this manner. Labeling of type specimens is strictly curatorial procedure which need not occupy space in a code of nomenclature."

Art. PB. 5, Prop. A (143 — Schulze and Buchheim, Taxon 7: 256): 4 accept, 3 reject.

Recommendation PB. 6A, Prop. A (106 — Ames et al., Taxon 7: 228): 2 accept, 5 reject.

Argument for rejection. — "When a specific name of a fossil *spora dispersa* is introduced into a recent genus, the specific name of the spore or pollen grain no longer has any scientific meaning; then *no* special name need be or can be attached to it."

Recommendation PB. 6A, Prop. B (113 — Traverse, Taxon 7: 230): 3 accept, 4 reject.

Argument for acceptance. — "Deletion of PB. 6A is preferable to Prop. A (106, Ames et al.), which adds a paragraph, or Prop. C (144, Schulze and Buchheim), which modifies the wording. Proposals A and C lend point to the idea that preference for description is personal and variable from one systematist to another. It seems impractical to provide sufficiently detailed instructions for description to cover all cases covered by the Code. No one is ever penalized, however, for providing too much meaningful detail in a description, but a name accompanied by an inadequate description may be a *nomen dubium*, and worthless. The implication of PB. 6A that all kinds of fossil organs can be "clearly indicated" — i.e., that fossil plant anatomists have achieved a descriptive "end point", may not be justified. There is, of course, no more reason for prescribing standard organ suffixes for names of fossils any more than, for example, habitat suffixes for names of modern genera. Most authors, left to their own good judgement, will find short euphonious names that are appropriate for new taxa. In addition to conflict of Rec. PB. 6a with the spirit of Art. 20, as indicated by Traverse, standard suffixes encourage sesquipedalianism. Generic names and specific epithets of from 15 to 25 characters are too big a price to pay for a mnemonic imagery, likely soon to be outmoded."

Argument for rejection. — "The recommendation is very necessary and cannot be deleted."

Recommendation PB. 6A, Prop. C (144 — Schulze and Buchheim, Taxon 7: 256): 1 accepts, 6 reject.

Argument for rejection. — See argument for acceptance of Proposal B.

Recommendation PB. 6B, Prop. A (107 — Ames et al., Taxon 7: 229): 5 accept, 2 reject.

Argument for acceptance. — "Procedure in emendation applies to all kinds of genera. Proper safeguards against gratuitous modification are already incorporated in the Code and no special provision is needed for fossil plants."

Recommendation PB. 6D, Prop. A (114 — Traverse, Taxon 7: 230): 3 accept, 4 reject.

Argument for acceptance. — "The sentiment expressed by Rec. PB. 6D is not necessarily wrong but any suggestion that the orthography of names is used to denote relationships is contrary to provisions of Art. 20. Deletion of this excess recommendation may help to direct attention to more important matters."

Argument for rejection. — "No. The Recommendation is necessary; we see it if we read Proposal 116."

Recommendation PB. 6F, Prop. A (108 — Ames et al., Taxon 7: 229): 1 accepts, 6 reject.

Argument for rejection. — "Prop. A does not go far enough and should be rejected in favor of Prop. B."

Recommendation PB. 6F, Prop. B (115 — Traverse, Taxon 7: 230): 3 accept, 4 reject.

Argument for acceptance. — "PB. 6F is unnecessary, redundant, and not properly a matter of nomenclature. The Code ought to be concise and unencumbered by needless passages of admonition."

New Art. PB. 7, Prop. A (54 — Arnold, Taxon 7: 157): 2 accept, 6 reject.

Argument for rejection. — "Should be rejected because: (1) it conflicts with Art. 20, which says, in part, generic names 'may be taken from any source whatever, and may even be composed in an absolutely arbitrary manner'; (2) it presumes a knowledge of *why* names were constructed by their authors and this information frequently is not available; (3) any judgement as to affinity, or presumption that an assigned affinity is incorrect, relates to taxonomy. Taxonomy is not to be prescribed by a correct code of nomenclature. For nomenclaturally inconsequential reasons, it sanctions sporadic departures from priority (Princ. III). Finally, added contravening provisions make the meaning absolutely indefinite, subject to different personal interpretations, and potentially, a continuing source of controversy. In many respects, the article proposed differs from any of the accepted articles in the present Code."

New Art. PB. 7, Prop. B (116 — Boureau, Taxon 7: 230): 2 accept, 6 reject.

Argument for rejection. — "Should be rejected because it invests the scientific names of plants, identified on the basis of specimens of secondary wood in this instance, with orthographic signification entirely outside the realm of nomenclature. Generic names may be taken from any source or composed arbitrarily. Names of genera have no bearing on their taxonomic position, but the proposed article suggests that names should be altered for reasons of etymologic propriety, depending on an author's presumption as to affinitity. Such changes result in a degree of nomenclatural instability, owing to differences in personal opinion with regard to which names are *most* appropriate. This kind of name changing contravenes and negates the principle of priority."

New Recommendation PB. 7A, Prop. A (55 — Arnold, Taxon 7: 157): 2 accept, 5 reject.

Argument for rejection. — "It is recommended that neither the proposed Recommendation PB. 7A, nor the new Article (PB. 7, prop. 54) it purports to moderate, be adopted. Both are actively destructive to principles of stable nomenclature."

New Article PB. 8, Prop. A (56 — Arnold, Taxon 7: 157): 3 accept, 5 reject.

Argument for rejection. — "Should be rejected since it suggests how material should be classified and does not deal with nomenclature. It introduces terms with no established meaning or definition (combination genus) and, in any case, is so indefinite in its implications that it does not belong in the Code, much less qualify as an Article. Situations envisioned by this proposal are uncommon. They always can be treated by the mechanism established for conservation of generic names."

New Recommendation PB. 8A, Prop. A (57 — Arnold, Taxon 7: 157): 2 accept, 5 reject.

Argument for rejection. — "Should be rejected as taxonomic instruction entirely outside the realm of nomenclature. This recommendation may be interpreted as sanction for contravening priority, and hence, disastrous to regular procedure in nomenclature. If such license is permitted, it will not be necessary for paleobotanists subsequently to refer to the Code of Nomenclature."

New Art. PB. 9, Prop. A (100 — Cross et al., Taxon 7: 226): 4 accept (2 stipulating "Not as a new article but perhaps as a recommendation"), 4 reject.

Argument for rejection. — "This should be rejected as procedural instruction not dealing with nomenclature."

New Art. PB. 10, Prop. A (313 — Potonie, Taxon 8: 19): 3 accept, 3 reject. (Note: The Secretary of the Committee has been advised by Professor Potonie that his previous Proposal B (176), which appeared on page 115, Regnum Vegetabile vol. 4, 1954, is to be disregarded.)

Argument for rejection. — "This should be rejected as ambiguous. Organs-within-organs is too indefinite and subject to diverse interpretation for any nomenclatural procedure to be based on it. Beyond this, if it means what it seems to imply, it also could be interpreted as free sanction for contravening priority."

Prop. O (Nomina generica conservanda proposita)

No. 45 — *Cordaianthus* Grand'Eury (Arnold, Taxon 7: 234): 5 accept, 2 suggest holding in abeyance.

Comments. — "Application of both conserved and rejected names is determined by

nomenclatural types (Art. 14, Note 2) and this information has not been provided in submitting the proposal. Hence, definite information is lacking to determine the sense in which the proposal is made, or how application of these names may be construed if *Cordaianthus* should be conserved. If study is conducted to determine the nomenclatural types of these names, it may serve to show they are not in conflict and do not require conservation. On the other hand, if nomenclatural types cannot be determined and it is decided that they are not capable of typification, neither name should be used. A name for which no type (lectotype) can be established, in order to stabilize application of the name, is certainly a *nomen dubium* or, at best, a *nomen inquirendum.* The proposal to conserve should, at present, be held in abeyance."

No. 46 — *Cladophlebis* Seward (Lowther, Taxon 7: 234): 5 accept, 2 suggest holding in abeyance.

Comments. — "The proposal does not indicate which species is the type of *Cladophlebis* Brongniart, or what bearing the species *Cladophlebis albertsii* (Dunker) Brongniart has on *Cladophlebis* Seward. Is the latter here proposed as a genolectotype? If so, some discussion should be presented regarding the basis for selection. Until the proposal is clarified it should be held in abeyance for reasons essentially the same as those stated in connection with the proposal to conserve *Cordaianthus.*"

No. 47 — *Asterocalamites* Schimper (Zimmerman, Taxon 7: 235, 8: 30): 5 accept, 2 reject.

Argument for rejection. — "This proposal evidently presents only part of the pertinent information. *Calamites radiatus* Brongniart cannot be regarded as the type for the genus *Asterocalamites,* as the genus *Calamites* has been conserved with reference to *C. radiatus* as its nomenclatural type (Stockholm, 1950; see Taxon 6, p. 150). Professor Jongmans, repeatedly cited by Zimmerman, was present and participated in the action of the Paleobotanical Nomenclature Committee which conserved *Calamites* with reference to this type species, so we may assume that Jongmans foresaw no better solution for stabilizing the application of that name. *Asterocalamites,* used only as a subgenus by Schimper, was instituted as a genus by Zeiller, but Zeiller apparently would have chosen *Bornia scrobiculatus* (Schloth.) Sternb. as the nomenclatural type. This is also by far the most widely known species usually identified with *Asterocalamites* Zeiller. The nomenclatural positions of *Bornia* Sternb., *Archaeocalamites* Stur and *Asterocalamites* Zeiller appear to be unsettled. Apparently some of the pertinent holotypes are different specimens, but lectotypes for these names have not been indicated in the proposal. It is not the responsibility of the Committee to establish the pertinent documentation; if lectotypes have not been chosen, they should be selected, as provided for by the Code in Article 7. Questions thus raised by the present proposal cannot be discussed satisfactory from the data at hand. In any event, this particular proposal cannot be accepted, since the type indicated for *Asterocalamites* is in conflict with that of the one name of the group, *Calamites* Brongniart (*nom. cons.*), which has claim to stability."

No. 48 — *Lyginopteris* Potonie (Zimmerman, Taxon 7: 236): 5 accept, 2 suggest holding in abeyance.

Comments. — "Nomenclatural types are not indicated and the correct technical applications and possible conflict of the names mentioned cannot be judged without this information. It is not a function of this Committee to attempt to determine the definitive lectotypes for any of these names, but it may be appropriate to suggest that the problem might be simplified if it should be found that diagnostic features of the holotypes of the type species do not show evidence of generic similarity. Regardless of whether natural relationship can be proved to be close, or whether it is indeterminable, it may still be advisable to maintain the genera as separate taxa. In this case conservation would not be necessary. The proposal should be held in abeyance until clarified."

(Note: Paleobotanists are herewith advised that there will be an opportunity for open discussion of the paleobotanical nomenclature proposals during the pre-Congress period (August 16-19) reserved for nomenclature sessions. Members of the Paleobotanical Nomenclature Committee will be present at the open meeting, the exact time of which will be announced later.)

RAPPORT SUR L'ACTIVITE DE LA COMMISSION DE NOMENCLATURE DES VIRUS

1954 - 1959

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En 1954, la Section de Nomenclature du 8e Congrès international de Botanique a décidé de constituer une commission spéciale de nomenclature des virus et nous a demandé de former cette commission. La Section ayant exprimé le voeu qu'une liaison étroite soit établie avec la Commission de Nomenclature des Virus du Congrès international de Microbiologie, le Dr. F. A. Stafleu, Secrétaire du "International Bureau for Plant Taxonomy and Nomenclature" à Utrecht (Pays-Bas), nous a suggéré de composer les deux commissions en faisant appel si possible aux mêmes personnes.

En octobre 1954, nous avons, avec leur accord, constitué notre Commission des virologues suivants, qui faisaient déjà partie, sauf nous, de la Commission de Nomenclature des Virus du Congrès international de Microbiologie: F. C. Bawden (Grande-Bretagne), C. W. Bennett (Etats-Unis), E. Köhler (Allemagne), P. Limasset (France), T. H. Thung (Pays-Bas, président de la Commission de Nomenclature des Virus du Congrès international de Microbiologie) et nous-même (Belgique). Monsieur K. M. Smith (Cambridge, Grande-Bretagne) également consulté pour faire partie de notre Commission a décliné notre invitation. Par suite de la grande dispersion des membres de notre Commission, nous avons dû traiter toutes les questions par correspondance, ce qui n'a pas beaucoup entravé nos travaux mais a donné naissance à un courrier très volumineux.

Deux questions importantes ont dû d'abord être résolues:

1) Quelle langue serait utilisée pour désigner les virus?
2) Quelle forme convenait-il de donner aux nouveaux nomes à créer?

A la suite des réponses reçues à un premier questionnaire envoyé le 26/XI/54 aux membres de la Commission, nous avons pu conclure que la *majorité d'entre eux était favorable à l'adoption d'une nomenclature latine*. De plus, nous en avons dégagé l'idée que notre Commission pourrait provisoirement n'envisager que les virus des plantes supérieures tout en maintenant le contact avec les Commissions qui s'occuperaient de la nomenclature des autres virus, afin d'arriver, si possible, à uniformiser la nomenclature de tous les virus.

A la suite des réponses reçues à un deuxième questionnaire envoyé le 27/I/55, la majorité des membres s'est ralliée à l'adoption de noms du type *Nicotianavirus altathermus*. De plus, Monsieur Thung, avec l'accord de plusieurs de ses collègues néerlandais, proposait que Monsieur Köhler et nous-même développions ce système.

A partir d'avril 1955, les virologues suivants, qui participaient déjà aux travaux de la Commission de Nomenclature des Virus du Congrès international de Microbiologie, ont accepté de faire partie de notre Commission: Messieurs A. Bitancourt (Brésil), F. C. McWhorter (Etats-Unis), I. W. Prentice (Grande-Bretagne) et E. van Slogteren (Pays-Bas).

Faisant suite aux décisions ci-dessus, nous avons, en avril 1955, adressé à Monsieur Köhler une première liste de noms correspondant à 169 virus, cités par "The Review of Applied Mycology, vol. XXIV, part. 13, issued July 1946". Quelque temps après nous recevions notre liste en retour avec un certain nombre de noms proposés par Monsieur Köhler pour remplacer quelques-uns des nôtres.

En juin 1955, nous avons envoyé, aux membres de notre Commission, les listes de noms proposés par Monsieur Köhler et nous-même. Les membres nous ont répondu en faisant parfois des remarques au sujet de certains virus ou de certains noms et en nous donnant leur avis sur ceux qu'ils préféraient. Dans sa réponse, Monsieur Thung (aidé de ses collègues néerlandais) nous a suggéré une liste complète de noms assez différents des nôtres et de ceux de Monsieur Köhler. Aussi, en novembre 1955, avons-nous, à nouveau, envoyé à chaque membre les trois listes proposées respectivement par Messieurs Köhler, Thung et nous-même afin que chaque membre choisisse le nom qui lui convenait le mieux. Grâce aux réponses reçues nous avons pu

fixer, pour chacun des virus de cette première liste, le nom qui avait reçu le plus de suffrages de la part des membres de notre Commission.

En novembre 1956, nous avons soumis à nos membres une liste complémentaire de noms correspondant à 37 autres virus repris dans une épreuve de la liste publiée par "The Review of Applied Mycology, vol. XXXV, supplement, issued August, 1957" *). Pour établir cette liste de 37 virus, nous avons tenu compte des virus qui, tout en figurant pour la première fois dans la nouvelle liste du R.A.M., faisaient l'objet d'une description détaillée dans l'ouvrage "Viruskrankheiten" de Köhler et Klinkowski (Parey, Berlin, 1954). A la suite de cet envoi, les membres nous ont répondu soit en marquant leur accord complet, soit en faisant quelques remarques de détail dont nous avons tenu compte dans la mesure du possible.

En septembre 1957, nos deux listes de virus ci-dessus ont été à nouveau, après certaines corrections, soumises aux membres de la Commission. Nous n'avons reçu au sujet de ces listes aucune contestation de la part de Messieurs Bennett, Bitancourt, Köhler, Limasset, McWhorter, Thung et van Slogteren. Par contre, les 2 membres suivants nous ont adressé les observations ci-après:

Monsieur Bawden: préfère les noms anglais du R.A.M. aux noms latins proposés par la majorité des membres de la Commission.

Monsieur Prentice: attire l'attention sur le fait que la Commission n'est pas unanime quant à la liste de noms proposés.

Avec l'accord des membres de notre Commission, nous avons, le 13 janvier 1958, adressé la liste que nous avions mise au point à 52 laboratoires de virologie répartis dans 19 pays. Dans la lettre accompagnant cet envoi, nous demandions à nos correspondants s'ils seraient disposés à utiliser, dans leurs articles scientifiques, les noms proposés, conjointement à ceux qu'ils utilisent normalement dans leurs écrits.

A nos 52 envois nous avons reçu 18 réponses, dont 5 seulement se montraient opposées au système proposé. Il s'agissait de Messieurs Blumer, Bovey et Münster (Suisse), Monsieur Black (Etats-Unis) et Monsieur Posnette (Grande-Bretagne).

Les 13 réponses, marquant l'acceptation de notre proposition sous réserve que notre liste soit approuvée par les Congrès internationaux de Microbiologie et de Botanique, émanaient des personnes suivantes: Madame Drachovska (Tchécoslovaquie), Messieurs Boyd et Prentice (Grande-Bretagne), Messieurs Bonnemaison et Pavillard (France), Messieurs Bode et Klinkowski (Allemagne), Monsieur McWhorter (Etats-Unis), Monsieur Milicic (Yougoslavie), Monsieur Zachos (Grèce), Monsieur Goidanich (Italie), Monsieur Bergold (Canada) et Monsieur Blattny (Tchécoslovaquie).

Enfin Monsieur J. H. Heller, "professor of the Classics, University of Illinois, Urbana (U.S.A.)" nous a adressé une lettre au sujet de la formation des noms de notre liste. A la suite de cette lettre, un certain nombre de modifications ont été apportées à ces noms.

En conclusion à nos travaux, nous présentons au Congrès international de Botanique, et au nom de la majorité des membres de notre Commission, la liste de noms annexée au présent rapport et correspondant à 171 virus attaquant les plantes supérieures.

LISTE DES NOMS PROPOSÉS PAR LA MAJORITÉ DES MEMBRES DE LA COMMISSION

Noms utilisés par le R.A.M.	:	*Noms proposés par la Commission*
(Rev. Ap. Mycology, 1957, August, suppl.)	:	
Abaca bunchy top virus	:	Musavirus rosettans
Abutilon infectious variegation virus	:	Abutilonvirus variegans
Agropyron mosaic virus	:	Agropyrumvirus maculans
Anemone alloiophylly virus	:	Anemonevirus deformans
Apple mosaic virus	:	Pyrusvirus maculans
„ rosette virus	:	„ rosettans
„ rubbery wood virus	:	„ molliens

*) Nous remercions à nouveau ici le Directeur de "The Commonwealth Mycological Institute, Kew, Surrey" pour la communication de cette épreuve.

Aster yellows virus	:	Callistephusvirus flavescens
Banana bunchy top virus	:	Musavirus deformans
Barley yellow dwarf virus	:	Hordeumvirus nanescens
Bean common mosaic virus	:	Phaseolusvirus maculans
„ southern mosaic virus	:	„ laedens
„ yellow mosaic virus	:	„ flavescens
Beet curly top virus	:	Betavirus verrucans
„ leaf curl virus	:	„ crispans
„ mosaic virus	:	„ maculans
„ yellow net virus	:	„ reticulosum
„ yellows virus	:	„ flavescens
Blackberry dwarf virus	:	Rubusvirus deformans
Black currant reversion virus	:	Ribesvirus senticosum
Broad bean mottle virus	:	Viciavirus maculans
Brome mosaic virus	:	Bromusvirus maculans
Cabbage black ring spot virus	:	Brassicavirus nigromaculans
„ ring necrosis virus	:	„ anulolaedens
Cacao swollen shoot virus	:	Theobromavirus inflans
Canna mosaic virus	:	Cannavirus maculans
Carnation mosaic virus	:	Dianthusvirus maculans
Cassava brown streak virus	:	Jatrophavirus flavescens
„ mosaic virus	:	„ maculans
Cauliflower mosaic virus	:	Brassicavirus nerviclarans
Celery mosaic virus	:	Apiumvirus maculans
Cherry mottle leaf virus	:	Cerasusvirus maculans
„ rasp leaf virus	:	„ verrucans
(Flowering) Cherry rough bark virus	:	„ asperans
Cherry rusty mottle virus	:	„ rubiginosum
(Sour) Cherry yellows virus	:	„ flavescens
Cineraria mosaic virus	:	Seneciovirus maculans
Citrus infectious mottling virus	:	Citrusvirus maculans
„ psorosis virus	:	„ scabiosum
„ stubborn disease virus	:	„ pertinax
„ tristeza virus	:	„ vastans
Clover big vein virus	:	Trifoliumvirus nervicrassans
„ club leaf virus	:	„ clavifoliatum
Subterranean clover mosaic virus	:	„ maculans
Red clover vein mosaic virus	:	„ nervimaculans
Cotton leaf curl virus	:	Gossypiumvirus crispans
Cowpea mosaic virus	:	Vignavirus maculans
Crotalaria mosaic virus	:	Crotalariavirus maculans
Cucumber green mottle mosaic virus	:	Cucumisvirus viridimaculans
„ mosaic virus	:	„ maculans
Dahlia mosaic virus	:	Dahliavirus maculans
Dandelion yellow mosaic virus	:	Taraxacumvirus flavescens
Dock mosaic virus	:	Rumexvirus maculans
Dodder latent mosaic virus	:	Cuscutavirus occultum
Elm phloem necrosis virus	:	Ulmusvirus librinecans
Epiphyllum mosaic virus	:	Epiphyllumvirus maculans
Euonymus infectious variegation virus	:	Evonymusvirus variegans
Fig mosaic virus	:	Ficusvirus maculans
Groundnut rosette virus	:	Arachisvirus rosettans
Henbane mosaic virus	:	Hyoscyamusvirus maculans
Hibiscus yellow vein mosaic virus	:	Hibiscusvirus nervimaculans
Holodiscus witches'broom virus	:	Holodiscusvirus everriculosum
Hop chlorotic disease virus	:	Humulusvirus flavopingens
„ nettle head virus	:	„ urticans
Iris mosaic virus	:	Irisvirus maculans

Laburnum infectious variegation virus	:	Cytisusvirus variegans
Lettuce mosaic virus	:	Lactucavirus maculans
Lily rosette virus	:	Liliumvirus rosettans
„ symptomless virus	:	„ occultum
Lovage mosaic virus	:	Levisticumvirus maculans
Lucerne dwarf virus	:	Medicagovirus nanescens
„ mosaic virus	:	„ maculans
„ witches'broom virus	:	„ everriculosum
Maize leaf fleck virus	:	Zeavirus variegans
„ mosaic virus	:	„ maculans
„ streak virus	:	„ virgatum
„ stunt virus	:	„ nanescens
„ wallaby ear virus	:	„ verrucans
Mountain ash infectious variegation virus	:	Pyrusvirus variegans
Mulberry mosaic virus	:	Morusvirus maculans
Muskmelon mosaic virus	:	Cucumisvirus vastans
Narcissus mosaic virus	:	Narcissusvirus maculans
Nothoscordum mosaic virus	:	Nothoscordumvirus maculans
Soil-borne oat mosaic virus	:	Avenavirus maculans
Oat pseudo-rosette virus	:	„ rosettans
Onion yellow dwarf virus	:	Alliumvirus flavorugans
Orchid (Cattleya) mosaic virus	:	Cattleyavirus maculans
„ (Cymbidium) mosaic virus	:	Cymbidiumvirus maculans
Ornithogalum mosaic virus	:	Ornithogalumvirus maculans
Papaw mosaic virus	:	Caricavirus maculans
Pea enation mosaic virus	:	Pisumvirus verrucans
„ mottle virus	:	„ maculosum
„ streak virus	:	„ virgatum
Peach asteroid spot virus	:	Persicavirus astrosignans
Peach calico virus	:	Persicavirus variegans
„ golden net virus	:	„ reticulosum
„ mosaic virus	:	„ maculans
Muir peach dwarf virus	:	„ nanescens
Peach necrotic leaf spot virus	:	„ maculiletans
Phony peach virus	:	„ mirabile
Peach red suture virus	:	„ rubescens
„ ring spot virus	:	„ anulosum
„ rosette virus	:	„ rosettans
„ wart virus	:	„ verrucans
„ western X disease virus	:	„ occidentale
„ willow twig virus	:	„ nudans
„ X disease virus	:	„ lacerans
„ yellow bud mosaic virus	:	„ gemmidecolorans
„ yellows virus	:	„ flavescens
Pear stony pit virus	:	Pyrusvirus lignifaciens
Pelargonium leaf curl virus	:	Pelargoniumvirus crispans
Phormium yellow leaf virus	:	Phormiumvirus flavofaciens
Potato aucuba mosaic virus	:	Solanumvirus aucuboides
„ leaf roll virus	:	„ perniciosum
„ virus X	:	„ X-nominatum
„ spindle tuber virus	:	„ fusiformans
„ stem mottle virus	:	„ maculans
„ stunt virus	:	„ nanescens
„ virus A	:	„ A-nominatum
„ virus Y	:	„ Y-nominatum
„ witches'broom virus	:	„ everriculosum
Primula mosaic virus	:	Primulavirus maculans
Prune dwarf virus	:	Prunusvirus nanescens

Radish mosaic virus	:	Raphanusvirus maculans
Rape savoy virus	:	Brassicavirus crispans
Raspberry leaf curl virus [1])	:	Rubusvirus crispans
„ necrotic fern leaf mosaic virus	:	„ letale
„ streak virus	:	„ virgatum
„ yellow blotch curl virus	:	„ nanescens
Rice dwarf virus	:	Oryzavirus nanescens
„ stripe virus	:	„ limitifaciens
Robinia brooming virus	:	Robiniavirus everriculosum
Rose mosaic virus	:	Rosavirus maculans
„ streak virus	:	„ caulomaculans
„ wilt virus	:	„ flaccofaciens
„ yellow mosaic virus	:	„ flavescens
Rubus stunt virus	:	Rubusvirus retinens
Sandal leaf curl mosaic virus	:	Santalumvirus crispans
„ spike virus	:	„ spicans
Squash mosaic virus	:	Cucurbitavirus maculans
Stock mosaic virus	:	Matthiolavirus maculans
Strawberry crinkle virus	:	Fragariavirus crispans
„ mild yellow edge virus	:	„ marginans
„ stunt virus	:	„ cupuliformans
„ witches'broom virus	:	„ everriculosum
Sugarcane dwarf virus	:	Saccharumvirus nanescens
„ Fiji disease virus	:	„ fijense
„ mosaic virus	:	„ maculans
„ streak virus	:	„ virgatum
Tea phloem necrosis virus	:	Camelliavirus librinecans
Tobacco etch virus	:	Nicotianavirus erodens
„ leaf curl virus	:	„ crispans
„ mosaic virus	:	„ maculans
„ necrosis virus	:	„ letale
„ ring spot virus	:	„ anulosum
„ streak virus	:	„ vulnerans
„ yellow dwarf virus	:	„ nanescens
Tomato aspermy virus	:	Lycopersicumvirus sterilefaciens
„ big bud virus	:	„ australiense
„ black ring virus	:	„ fructudecolorans
„ bushy stunt virus	:	„ dodecahedron
„ spotted wilt virus	:	„ zonatum
„ yellow net virus	:	„ reticulosum
Tulip breaking virus	:	Tulipavirus vulgare
Turnip yellow mosaic virus	:	Brassicavirus octahedron
„ yellows virus	:	„ flavescens
Vaccinium false blossom virus	:	Vacciniumvirus sterilifaciens
„ stunt virus	:	„ nanescens
Vine infectious degeneration virus	:	Vitisvirus vastans
Soil-borne wheat mosaic virus	:	Triticumvirus maculans
Winter wheat mosaic virus	:	„ retardans

[1]) selon C. W. Bennett.

ABOUT THE CAPITAL INITIAL LETTER IN SPECIFIC EPITHETS

Aldo Pesante (Pavia)

A knotty point in taxonomic nomenclature, and one which still waits for a proper and clear solution, is that of the capital initial letter in specific epithets. It is a well-known fact that these epithets may be of various grammatical classes, and that since Linnaeus this has been taken into consideration in arriving at a reasonable use of the capital initial letter in accordance with logic and with latin grammar.

As a result of the heterogeneity of the epithets there remained, sometimes, disagreement about the use of the capital or the small letter for some classes: so, considering only the last half century, we see, for instance, that, while some authors use the capital letter for names of persons, for geographical names, and for names of genera, others restrict the use to the first two, or to the first only of these classes. And even the International Code of Botanical Nomenclature, the highest authority in this matter, in the 1948 edition [1]), while admitting the use of the capital letter for some classes, excludes unexpectedly that of geographical names (e.g. *Aster novi-belgii*) (rec. XLIII, p. 28).

As a consequence of this variation in usage the practice of writing all specific epithets with a small initial letter began many years ago but became progressively more common in the last ten years.

It would have been a good thing if the Nomenclature Section of the Stockholm Congress, responsible for the latest version of the provisions on this matter (see 1952 edition of the Code [2]), had put order in this *chaos* with a recommendation based on respect for the logic and the rules of the official latin language. The Section, on the contrary, preferred to settle the question with the following recommendation (n. 82 G, p. 46): "All specific and infraspecific epithets should be written with a small initial letter, though authors desiring to use capital initial letters may do so when the epithets are directly derived from the names of persons (whether actual or mythical), or are vernacular (or barbaric) names, or are former generic names".

The first remark that must be made is that epithets (excepted the doubtful cases, which I will discuss later), *must* (and not *should*) be written with small letter: this is probably a *lapsus* which already existed in the preceding edition of the Code. But it is of the innovations that I will speak.

In substance, Recomm. 82 G suggests the suppression of the capital initial letter, but it explicitly admits its use in those cases in which it was suggested in the preceding edition (recomm. XLIII). This admission, unnecessary for an optional precept *), leads us to believe that there was not in this regard full unanimity in the Section; and it is to be hoped that this was so, for if at a first glance the recommendation appears a good one (and certainly it has been accepted with favour by all those students who had already suppressed the capital letter for epithets), when considered with more attention it reveals itself as illegitimate, and presents no practical advantages to counterbalance its real disadvantages.

With the suppression of the capital letter the Commission evidently aimed at that uniformity which is one of the objectives of the recommendations (art. 2, p. 13); but these are not retroactive: "names or forms contrary to a recommendation cannot be rejected, but they are not examples to be followed" (ibid.); so that, strictly speaking, one should go on writing with a capital letter all the epithets which possessed it before 1952, and with a small letter those created after that date: with what an advantage for uniformity it is easy to imagine.

But even if this objection is overcome by "levelling" the names published before 1952, what advantage can be gained from so doing?

From a linguistic view-point, the recommendation is illegitimate; having adopted latin as the official language, it is proper to respect its grammar; and this requires that all names of persons and all geographical names be written with a capital letter whatever their grammatical case: one must therefore write, for instance, *Dianthus Seguieri, Sphaeropsis Novae-Hollandiae;* the same is true, according to taxonomical rules, for the names of families and genera: e.g. *Pseudo-*

*) The Code divides the precepts into *rules,* with compelling force, and *recommendations,* which it is only optional to follow.

monas Solanacearum, Alternaria Brassicae; and also for that heterogeneous group of epithets (all in the nominative case) that are partly names of pre-linnean, or invalidated, genera, partly vernacular names and similar ones, all originally proper names or assimilable to these: for inst. *Helianthemum Tuberaria, Teucrium Scorodonia, Astrocaryum Muru-Muru, Phoma Lingam.* Of the adjectives still according to latin grammar, those derived from names of persons must begin with capital letter (e.g. *Geranium Robertianum*) while those derived from geographical names, for which latin grammar has no definite rule, can be written with a small initial letter (and it is better to do so, following usage, to avoid further confusion) (e.g. *Lolium italicum*). Finally, one must write with a small initial letter the epithets consisting of more truly qualificative adjectives (e.g. *Carthamus tinctorius*).

It is difficult to know in which class to put some epithets, such as that of the binomial *Aleurodiscus oakesii* (from oak): bad linguistic hybrids, which ought to find no place in nomenclature.

This respect for the language, which we find in all old naturalists, is not scholastic pedantry but has, at least for us Latins, a deeper reason not only of logical but also of sentimental nature. Names as *Abutilon avicennae, Crepis dioscoridis, Arundo plinii, Asplenium petrarchae, Spirographis spallanzanii, Campanula allionii, Berberis darwinii, Polyporus friesii, Graphium saccardoi* seem to us at least discordant; and it seems paradoxical that a student, who wishes to honour his Teacher by dedicating a species to him, should write his name with small initial letter and close with his own name written with a capital one.

I would add, by the way, that this improper use of the small initial letter tends to extend in a wholly arbitrary way, beyond the limits of taxonomic nomenclature itself: so, in a text of mycology, a valued one indeed, one finds regularly the expression *petri dish:* as if one who has done something good in science acquired for this the right to have his name degraded.

And passing from human to superhuman, one ought to write not only *Amorphophallus titanum, Abies apollinis, Lychnis flos-jovis, Scandix pecten-veneris,* but even *Adiantum sanctae-catharinae, Aristida adscensionis, Paliurus spina-christi, Inula oculus-christi, Helichrysum gloria-dei.* And of the geographical names, we Italians too ought to write *Saccharum ravennae* and (if it be permitted to me to pass the boundaries of zoology, where things go in the same way) even *Passer italiae!*

These reasons would be sufficient for rejecting the recommendation under discussion, but there is something more.

Taxonomic names have not only the function of cataloguing the species, but also of giving some mnemonic characters of them, whose value cannot be too much appreciated. This is tacitly admitted by the Code itself, which says that "The specific epithet should preferably give some indication of the appearance, the characters, the origin, the history or the properties of the species" (Recomm. 33 A, p. 23).

But it is at this very point that the inconsistency of levelling the names appears: through doing so, evidently, one aims not at uniformity for itself, but one expects to remove doubts which could arise about whether the initial of the epithets should be capital or small. Now, it is clear that he who knows the meaning of an epithet, or even perceives only the class to which it belongs, has no doubts on the matter; these arise only when the meaning of the epithet is wholly obscure. But what use is it that the epithets give some indication of the appearance, the characters, etc., of the species, if this indication is not understood? Welcome be the doubt, if it induces the student to search for the meaning of the words he uses. And if he finds a capital letter of which he has not the time, or the wish, to search for the reason, he will know at least that the word is not an adjective giving some character of the species, as one could think, for instance, in the case of *Pirus Malus* and *Asclepias Cornuti.*

The proper use of capital letters can also resolve doubts in many cases of apparent discordance between the generic name and the epithet. When, for instance, we find the following binomials, all written with a small epithet: *Convolvulus cantabrica, Senecio cineraria, Coronilla emerus, Carduus personata, Centaurea cyanus, Allium victorialis, Cytisus laburnum, Hyalopus violaceum, Glomerella lagenarium, Sphaeropsis quercinum, Tylenchus devastatrix,* we cannot distinguish, unless we know them already, the correct binomials from the wrong ones; but if the first seven are written correctly with a capital letter, we will see at once that their

epithets are substantives and therefore not to be made concordant with the generic names, while the others are adjectives and therefore of wrong gender. And the error, when not due to a wrong transcription, may derive either from discordance in the original binomial (for inst. *Paecilomyces dactylethromorphis*), or from change of the generic name without subsequent change of the gender of the epithet (for inst. *Corticium filamentosa* instead of *Pellicularia filamentosa, Glomerella lagenarium* instead of *Colletotrichum lagenarium*). In this regard says Saccardo: "*Etiam incorrectum et prope ridiculum videtur scribere* Glomerella cinctum *nec* Glomerella cincta *et multa alia similia* (*ut nonnulli botanici americani*) *ex eo quod status conidiophorus est* Gloeosporium cinctum *e genere neutro*" [3]). But the error still continues.

On this point it is relevant to draw attention to a defect in the Code which, while clearly admitting the correction of typographic (e.g. from *Rosa pissarti* to *Rosa pissardi*) and orthographic (e.g. from *Pereskia opuntiaeflora* to *Pereskia opuntiiflora*) errors, giving on the subject unusually numerous examples (art. 82, p. 44), says nothing about the correction of false concords.

And continuing the exemplification, with the use of the capital letter in the proper cases, the reason of the identity of the termination in such binomials as *Gentiana cruciata* and *Galium Cruciata, Phoma persicaria* and *Polygonum Persicaria, Geranium molle* and *Schinus Molle* appears clear; and if the student desires to know the reason for these supposed incongruities, he will see, for the last species, that the epithet has nothing to do with the consistency of the plant, but is a peruvian vernacular name.

And too, while in *Torulospora Rosei* the homage to a certain Mr. Rose will be clear, in *Paecilomyces cremeo-rosei* both the colour of the fungus and the complete ignorance of the latin language by the author of the species will be equally clear.

A very convincing proof of the advantage of using capital letters is given, among others, by the case of *Phytomonas* (= *Xanthomonas*) *malvacearum*, which a student thought to do well to "correct" (and others to accept the correction) into *Ph. malvaceara*, thinking, evidently, the epithet to be a hypothetic adjective *malvacearus* (*-a, -um*). If those students had seen the binomial written correctly as *Ph. Malvacearum*, they certainly should have avoided such a big error.

In conclusion, the reasons for a rational use of the capital letters for the epithets are too strong to ignore them in view of a doubtful simplification in writing.

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[1]) Anon. — 1948 — International Rules of Botanical Nomenclature — Waltham, Mass. U.S.A.

[2]) Anon. — 1952 — International Code of Botanical Nomenclature — Utrecht.

[3]) Saccardo P. A. — 1882-1926 — Sylloge Fungorum Omnium etc., vol. XVII, p. 573.

PRELIMINARY MAIL VOTE*

	Yes	No	Comm.
Preamble			
A	10	17	183
Principle I			
A	23	19	162
Principle III			
A	43	153	6
Principle IV			
A	22	191	1
B	10	202	2
C	8	198	1
Principle V			
A	3	215	0
B	171	52	0
C	29	188	0
Principle VII			
A	184	25	11
Principle VIII			
A	103	99	8
B	119	71	8
Principle IX			
A	191	16	16
Article 1			
A	4	219	2
Article 2			
A	4	222	1
Article 3			
A	5	220	2

* On the proposals on botanical nomenclature submitted to the Montreal Botanical Congress in the "Synopsis of Proposals" (Regnum Vegetabile vol. 14). See also "Preface" on p. 110 of this number of Taxon.

	Yes	No	Comm.
Article 4			
A	19	195	1
B	16	198	0
C	21	164	31
D	16	194	1
E	9	202	0
Recommendation 4A			
A	201	8	6
Article 5			
A	10	27	161
B	121	66	21
C	2	214	1
Article 6			
A	159	4	43
Article 7			
A	214	14	0
B	17	221	0
C	8	15	181
D	70	26	119
E	14	15	172
F	55	160	1
G	170	44	11
H	56	171	2
I	205	16	4
K	145	56	5
L	186	30	3
M	18	205	0
N	135	79	1
Article 8			
A	3	223	0
B	36	178	4
Recommendation 8A			
A	0	180	33
Recommendation 8B			
A	6	173	36
Recommendation 8C			
A	200	15	3
B	5	176	35
Recommendation 8D			
A	5	171	34
Recommendation 8E			
A	0	180	35
B	196	11	24
Article 9			
A	12	18	188
Article 10			
A	23	148	40
B	104	113	9
C	69	149	4
D	8	22	189
Article 10bis			
A	48	144	23

	Yes	No	Comm.
Article 11			
A	189	9	15
B	209	11	5
Article 13			
A	21	24	30
B	8	20	31
C	19	7	34
D	4	23	34
E	3	23	156
F	18	33	133
Article 14			
A	45	171	1
B	15	188	3
C	3	161	35
D	7	158	36
E	4	155	42
F	8	199	5
G	11	189	1
H	197	16	2
I	198	15	0
Article 14bis			
A	91	112	4
Article 15			
A	177	10	30
B	12	80	113
Recommendation 15A			
A	204	10	1
Recommendation 16A			
A	17	185	1
B	14	193	1
Article 17			
A	185	31	3
B	7	207	3
C	145	72	2
D	46	156	0
E	210	10	0
Article 18			
A	5	213	2
B	10	210	1
C	196	18	4
D	125	75	15
E	94	41	77
F	53	35	126
G	169	43	2
H	17	199	0
I	4	199	5
Recommendation 18A			
A	12	197	6
Article 19			
A	6	211	1
B	7	204	1
C	133	71	4
D	5	203	1

	Yes	No	Comm.
Article 20			
A	183	12	28
B	203	18	3
C	57	144	6
Article 21			
A	191	2	16
B	189	10	7
C	196	15	5
Recommendation 21A			
A	36	10	164
Article 22			
A	10	212	0
B	15	198	1
Recommendation 22B			
A	3	10	197
Recommendation 22C			
A	1	223	0
Article 23			
A	16	195	2
B	199	11	11
C	179	29	12
D	12	12	181
Recommendation 23B			
A	30	39	146
Article 24			
A	19	44	150
B	175	27	13
C	190	9	12
Article 26			
A	9	210	0
B	132	42	42
Recommendation 26A			
A	1	220	0
Article 27			
A	175	23	13
Article 29			
A	8	25	178
B	9	11	194
Recommendation 29A			
A	6	28	178
B	13	183	14
Article 31			
A	21	14	172
Article 31bis			
A	5	216	2
Article 31ter			
A	8	211	3
Section 2			
A	32	180	9
Article 32			
A	4	216	0
B	20	13	173
C	18	21	170
D	18	8	181
E	174	31	11
F	158	56	4
G	188	32	3
H	201	20	2
I	8	209	1
K	200	20	3
Article 33			
A	46	229	12
B	1	33	172
C	11	171	27
Article 34			
A	18	200	3
B	25	16	166
C	15	15	175
D	14	21	172
E	32	182	3
Recommendation 34A			
A	163	53	5
Article 35			
A	24	9	168
B	22	14	170
C	26	58	132
Recommendation 35B			
A	180	40	5
Article 35bis			
A	5	219	1
Article 36			
A	22	12	167
B	10	20	172
C	4	23	173
D	24	9	164
Article 37			
A	8	208	3
Article 39			
A	30	2	172
B	13	18	175
Article 40			
A	6	7	184
Article 41			
A	14	4	191
Recommendation 41A			
A	178	16	22
Article 42			
A	157	64	3
B	5	204	4
C	23	21	165
D	45	14	151
Recommendation 42A			
A	1	222	0

	Yes	No	Comm.
Article 43			
A	3	195	8
Article 44			
A	56	16	144
Article 45			
A	212	7	5
B	6	34	26
C	195	11	8
Recommendation 45C			
A	216	4	0
Recommendation 45G			
A	65	154	2
Article 46			
A	31	14	163
B	8	186	16
C	6	58	146
Recommendation 46A			
A	105	87	14
B	6	213	0
C	12	207	1
D	9	210	2
Recommendation 46B			
A	91	28	100
B	46	172	1
C	2	209	6
D	2	110	5
E	3	194	19
Recommendation 46C			
A	4	202	10
Article 47			
A	9	24	171
Recommendation 47A			
A	19	184	10
B	29	94	96
Recommendation 47B			
A	75	54	95
Recommendation 47C			
A	11	199	4
Article 48			
A	197	19	2
B	56	116	36
C	14	179	13
Article 49			
A	6	120	92
Recommendation 49A			
A	4	119	97
Recommendation 49B			
A	11	101	102
B	15	96	103
Article 50			
A	0	64	144
Recommendation 50A			
A	7	172	40
B	14	16	176
Recommendation 50B			
A	24	170	20
Recommendation 50C			
A	1	220	2
Recommendation 50D			
A	133	79	9
B	6	201	1
C	1	186	35
D	8	199	2
Recommendation 50Dbis			
A	32	64	12
Recommendation 50G			
A	2	156	48
Recommendation 50H			
A	193	19	3
Article 51			
A	34	163	15
B	5	11	189
C	5	29	168
Article 52			
A	6	36	167
B	18	9	184
Article 53			
A	7	14	186
Article 55			
A	10	14	183
B	7	19	179
C	4	3	197
D	2	14	188
E	19	3	187
Article 57			
A	18	6	186
B	8	13	189
Article 58			
A	17	8	176
Article 59			
A	6	119	65
B	136	28	28
Article 60			
A	17	11	177
B	9	202	2
Article 61			
A	2	206	1
B	10	199	1
Article 62			
A	12	6	192
Article 62bis			
A	93	130	2

	Yes	No	Comm.
Article 63			
A	136	50	36
B	14	72	121
Article 64			
A	8	209	0
B	9	38	21
C	189	28	2
D	211	8	2
E	6	4	196
F	9	5	192
Article 65			
A	91	125	2
B	5	29	163
C	77	75	57
D	66	84	37
Article 66			
A	100	121	0
B	68	142	1
C	65	95	23
Article 67			
A	11	101	1
B	52	129	6
C	58	140	3
Article 68			
A	50	79	68
B	61	143	4
C	131	46	21
Article 69			
A	7	63	138
B	154	33	22
Article 70			
A	9	206	0
B	148	32	27
Article 71			
A	4	29	173
Article 73			
A	13	9	179
B	133	23	56
C	35	5	165
D	6	187	13
E	18	178	11
F	35	28	121
G	34	109	54
H	40	101	55
I	10	27	166
K	15	16	170
L	20	10	172
M	18	11	173
N	17	17	168
O	18	14	174
Recommendation 73C			
A	20	24	160
Recommendation 73H			
A	16	15	156
Recommendation 73I			
A	49	141	21
Article 74			
A	137	4	60
Recommendation 75A			
A	6	6	190
B	1	5	194
C	5	3	194
Article 75bis			
A	49	119	38
Article H. 1			
A	22	3	134
B	17	3	138
C	21	14	125
D	20	5	135
E	13	16	129
Article H. 2			
A	24	6	126
Article H. 3			
A	13	3	138
Recommendation H. 5A			
A	39	4	114
Appendix II			
A	20	9	87
B	11	6	95
C	3	19	92
Article PB. 1			
A	22	5	87
B	4	19	86
C	18	13	78
Article PB. 2			
A	5	28	76
B	20	5	87
Article PB. 3			
A	13	13	84
B	9	16	84
C	14	13	84
Recommendation PB. 4A			
A	17	6	89
Article PB. 5			
A	26	7	78
Recommendation PB. 6A			
A	18	8	52
B	8	20	83
C	22	13	76
Recommendation PB. 6B			
A	16	8	85
Recommendation PB. 6D			
A	8	18	85

	Yes	No	Comm.
Recommendation PB. 6F			
A	2	21	85
B	6	18	85
Article PB. 7			
A	8	29	79
B	6	27	80
Recommendation PB. 7A			
A	9	23	78
Article PB. 8			
A	14	24	79
Recommendation PB. 8A			
A	11	26	78
Article PB. 9			
A	21	8	86
Article PB. 10			
A	9	30	77
Appendix III			
A	17	161	2
B	3	162	6
C	21	10	4
D	17	10	4
E	124	35	12
F	12	4	136
G	11	4	126
H	4	3	133
I	7	3	144
K	3	3	145
L	1	35	112
M	3	36	100
N	103	45	12
O	8	5	134
Appendix IV			
A	171	4	14
B	28	67	42
Arrangement			
A	17	16	153
B	39	3	141
C	14	3	164
Addenda			
319	52	87	9
320	4	144	7
321	22	17	16

VARIOUS COMMENTS

NEW PRINCIPLE VIII

In dem Vorschlag für ein "N e w P r i n c i p l e VIII", den ich an sich grundsätzlich gutheiße, wird neben den allgemein bereits verwendeten Termini "Binom" und "Trinom" bzw. den davon abgeleiteten Adjektiven "binomial" und "trinomial" ein neues Wort "M o n o m" bzw. "m o n o m i a l" vorgeschlagen.

Dieses neue Wort stellt sprachlich eine ganz unmögliche Bildung dar. Vorausgesetzt, daß es sich wirklich um Worte griechischer Herkunft handelt, müßte die Neubildung natürlich entsprechend bi- und tri- mit m o n o- vorgenommen werden, also Mononom und mononomial.

Aber davon kann wohl kaum die Rede sein. Wenn ich recht sehe, herrscht hier keinerlei Zusammenhang mit dem griechischen "Nomos" — abgesehen davon, daß es in diesem Fall dann *D*inom und *d*inomial heißen müßte —; es ist ja zudem auch die Nachsilbe -ial oder -alis keineswegs griechisch.

Also muß man doch wohl, zumindest in unserem biologischen Gebrauch, diese Termini mit dem lateinischen "nomen" in Zusammenhang bringen, wenn auch die Stammverkürzung von nomin- auf nom- nicht gerade sauber ist.

Wenn dies aber richtig sein sollte, dann gibt es nur *eine* Möglichkeit für die in Frage stehende Neubildung, nämlich die lateinische, also "U n i n o m" und "u n i n o m i a l".

H. Merxmüller

Art. 14, Prop. A and Art. 14 bis, Prop. A.

Considering the deep rift in opinion between botanists regarding the advisibility of adopting either *nomina specifica rejicienda* or *nomina specifica conservanda* and the arguments for or against either of the two, it appears that the rejection of one of them might have very regrettable consequences.

Whatever might be one's opinion, a very appropriate and forceful example is set forth in the Synopsis of Proposals on p. 59 in the note ending Prop. B (270 — Silva, Taxon 8: 10) for Art. 48. In this example conservation of a name for a specified circumscription of a taxon, can only be obtained by *nomina specifica conservanda.*

On the other hand, in other cases, the application of a *nomina conservanda* clause would lead to major inconveniences and these

would more suitably be dealt with by a *nomina specifica rejicienda* clause.

It appears from what precedes that the I.C.B.N. should make provisions both for *Nomina specifica rejicienda* and for *Nomina specifica conservanda.*

It seems clear to me now that the adoption of one method for the conservation of names, of whatever level, in no way excludes the other and both ways for obtaining conservation can be provided for in the I.C.B.N.

R. L. Steyaert

ARTICLE 17

Proposal D under Article 17 is withdrawn by the authors: G. M. Schulze and G. Buchheim.

ARTICLE 67

To read: "A name must be rejected when it is based on a monstrosity of a previously legitimately described species".

In our experience, *Phaeodactylum tricornutum* has normally spindle-shaped cells, which, because of their resemblance to other organisms, were not recognized in nature. * The name *tricornutum,* as a specific epithet, was given to a tri-radiate form which, though unusual, is readily recognizable. Ambiguity of the present code, Article 67 as it now stands, led us to question the legitimacy of the above binomial, but the consensus seems to be that the name is valid. Clarification of Art. 67 appears therefore desirable, as proposed above.

J. C. Lewin

APPENDIX II

SPECIAL PROVISIONS CONCERNING FOSSIL PLANTS

Proposal:

The entire Appendix II — special provisions concerning fossil plants should be deleted as an appendix and the pertinent rules and recommendations included therein should be re-incorporated into the main body of the code.

Argument:

An appendix of special provisions dealing with fossil plants is an awkward attempt to bring together in one place certain rules which govern (or are believed to govern) the nomenclature of fossil plants more than certain other rules.

A number of special cases for fossil plants have already been indicated in the main body of the present code as extra notes or paragraphs, e. g., in the Preamble (Par. 7), Article 7 (Note 5), Article 8 (Recommendation 8D), Article 13 ("Fossil Plants"), Article 36 (Par. 1), and Article 58. In such context these special provisions are quite clear.

But more important than this, it is abundantly evident that most Articles in the present Code are directly applicable to fossil plants as well as to recent plants. Those parts applicable in part or whole to fossil plants are the *Preamble, Division I. Principles* (all six), *Division II. Rules and Recommendations* (Articles 1-27, 29-31, 33, 36-38, 41-42, 44-49, and 51-75), and *Division III. Provisions for modification of the Code.*

Each special provision for fossil plants set aside in an appendix initiates uncertainty as to the status of application of one or more other rules in the main body of the code. Most such provisions segregated in an appendix are out of context and thus are more likely to be ambiguous than if incorporated in the code in the pertinent divisions, chapters, sections or articles.

Supplementary Proposals:

The following proposals are largely editorial in character and suggest a reasonable dispensation of rules and recommendations now included in Appendix II with exceptions noted.

1. *General Principles.* Article PB. 2, and PB. 1, in that order, should be included as two new Principles under Division I. Principles.

2. *Conditions and Dates of Valid Publication of Names.* Article PB. 3 should be deleted as it is superfluous to Article 39, and in part to Paragraph 1, Article 36, both of which have been in effect in essentially the same form since the Amsterdam Congress.

Article PB. 4, sentence 1, should be incorporated as a new Paragraph in Article 9.

Article PB. 4, sentence 2, should be incorporated in Article 10 as a new Paragraph.

Article PB. 5 should be incorporated in Article 60 as a new Paragraph.

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*) Observations on *Phaeodactylum tricornutum.* Joyce C. Lewin, R. A. Lewin and D. E. Philpott.

J. gen. Microbiol. 18: 418-426. 1958.

The taxonomic position of *Phaeodactylum tricornutum.* Joyce C. Lewin.

J. gen. Microbiol. 18: 427-432. 1958.

Article PB. 6 should be incorporated as new Note under Article 41.

Recommendation PB. 6A should be incorporated as a new Recommendation under Article 41.

Recommendation PB. 6B should be incorporated as a new Paragraph under Article 51.

Recommendation PB. 6C first sentence should be incorporated as a new Note in Article 7.

The Note in PB. 6C should be incorporated as a new Note in Article 18.

Recommendation PB. 6D should be incorporated as a new Recommendation in Article 58 and the words "of fossil plants" should be added following "in descriptions of organs."

Recommendation PB. 6E should be incorporated as a new Recommendation in Article 8 following Recommendation 8B and the words "of fossil plants" should be added following "in descriptions of new species."

Recommendation PB. 6F might be added as a Note or Recommendation to Article 65.

Aureal T. Cross

ARTICLE PB. 4

Proposition: supprimer l'article.

Commentaire: Tel qu'il est rédigé l'article PB. 4 oblige un auteur qui crée un genre ou une espèce de plante fossile à rechercher dans la littérature l'espèce la plus anciennement décrite ou le spécimen le plus anciennement décrit et figuré, qui présente par lui-même les caractères nécessaires pour distinguer le nouveau taxon d'autres taxa; ceci, d'après le texte de l'article, même si ces caractères différentiels ne sont pas effectivement indiqués dans la description ou la figure ancienne.

Cette méthode automatique est propre à introduire beaucoup de confusion dans la nomenclature; elle n'est pas scientifique et se trouve, de ce fait, en contradiction expresse avec l'esprit de l'Appendice IV (4) concernant le choix des types. La méthode du choix des types doit pourtant être la même pour les plantes vivantes et les plantes fossiles; ceci est clairement exprimé Article 7, note 5 et Appendice IV (7).

Les mêmes remarques s'appliquent lorsqu'il ne s'agit non pas de l'établissement d'un genre nouveau ou d'une espèce nouvelle, mais du choix d'un lectotype pour un taxon anciennement décrit.

L. Grambast

ARTICLE PB. 5

Proposition: supprimer l'article.

Commentaire: La méthode du choix des types, lorsque des taxa sont remaniés ou divisés, est prévue d'une façon générale par les dispositions des articles 51, 52, 53 et celles de l'Appendice IV. L'introduction d'une méthode particulière pour les plantes fossiles est inutile et contraire à l'article 7, note 5 et à l'Appendice IV (7). Si l'on voulait cependant conserver l'esprit de cet article PB. 5 on pourrait le passer à l'état de recommendation.

L. Grambast

APPENDIX III

It is proposed:

1. To withdraw from Appendix III. *Aphanothece* Naeg. (I). There is no good reason to use this name instead of the older *Coccochloris* Spreng. (see Drouet et Daily, Rev. Cocc. Myx. (1956) 13).

2. Not to accept the name *Microcystis* Kütz. in Lemm. 1907 as a "nomen conservandum". There is no good reason to neglect the correct name *Diplocystis* Trevisan (see J. Komárek in Taxon VI (1957) 145-149).

J. Koster

NOMINA GENERICA CONSERVANDA

On 1 February 1959 the General Committee decided to adopt the following Nomina Conservanda, recommended for conservation by the Committee for Spermatophyta (Taxon 7(7): 184-193. 1958). These names now fall under the provisions of Article 15 of the International Code of Botanical Nomenclature, i.e. botanists are authorized to retain them pending the decision of the IXth International Botanical Congress to which they are herewith presented for final approval.

424 *Bambusa* Schreb.
899 *Murdannia* Royle
951 *Chionographis* Maxim.
952 *Heloniopsis* A. Gray
1024 *Kniphofia* Moench
1166 *Hessea* Herbert
1189 *Nothofagus* Bl.
1208 *Hippeastrum* Herbert
1533 *Bletilla* Reichenb.
3424a *Santaloides* Schell.
4111 *Simaruba* Aubl.
4667 *Euscaphis* Sieb. et Zucc.
5557 *Myrteola* Berg

5583 *Syzygium* Gaertn.
.... *Samyda* Jacq.
5599 *Leptospermum* Forst.
6626 *Kopsia* Bl.
7380 *Dunalia* H. B. K.
7741 *Dolichandrone* Seem
7887 *Rechsteineria* Regel
7990 *Stenandrium* Nees

2261 *Suaeda* Forsk. ex Scop. as amended in Taxon 7: 189.
3553 *Pterolobium* R. Br. as amended in Taxon 7: 190.

The Committee decided that the conservation of 1050 *Nothoscordum* Kunth, 5600 *Agonis* Lindley and 5625 *Verticordia* D.C. is superfluous.

NEWS AND NOTES

NOTICES OF BOOKS

Contributions to this column will be gratefully received by Dr. K. U. Kramer, Botanical Museum, Lange Nieuwstraat 106, Utrecht, Netherlands.

Flora of Porto Rico

Scientific Survey of Porto Rico and the Virgin Island VII, 4. H. A. Crum & W. C. Steere: The Mosses of Porto Rico and the Virgin Islands. New York Acad. of Sci., 1957. (pp. 395-599, 48 figs.; with keys and descriptions; deals with all *Musci*).

Flora of the Belgian Congo

W. Robyns: Flore du Congo Belge et du Ruanda-Urundi. Spermatophytes. Tableau analytique des familles. Bruxelles, 1958. (69 pp.).

Ranunculaceae of Malaysia

H. Eichler: Revision der Ranunculaceen Malesiens. Publ. as Vol. 124 of Bibliotheca Botanica, Stuttgart, 1958. (110 pp., 7 plates, 20 figures and maps; with keys to the species, descriptions, citations of specimens, and index to collectors' numbers).

Flora of the U.S.S.R.

Flora S.S.S.R., ed. by B. K. Šiškin. Vol. 23. Publ. by Acad. Sci. U.S.S.R., Moscou/Leningrad, 1958. (xxiii + 775 pp., 34 plates; *Bignon.* — *Valerian*).

Flora of Germany

W. Rothmaler & collab.: Exkursionsflora von Deutschland. Gefässpflanzen. Berlin, 1958. (xlvii + 502 pp., with numerous figures; deals with all vascular plants; with notes on geography, biology, sociology, and glossary).

Carex of Indo-China and Siam

M. Raymond: *Carices* Indochinenses necnon Siamenses. Publ. as Mém. Jard. Bot. Montréal no. 53, 1959. (125 pp., 34 figs. and maps; with keys, citations of specimens, descriptions of new species, notes on geography and phylogeny, and physiography of the region; in English).

Cactaceae

C. Backeberg: Die *Cactaceae*. II. *Cereoideae* (*Hylocereeae* — *Cereeae* [*Austrocereinae*]). Gustav Fischer Verlag, Jena, 1959. (pp. xxi-xxiii, 639-1360, fig. 619-1314, partly in colour, pl. 36-107; price ca. 80 DM.).

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R. Ciferri: Supplementum (1911-1930), L-Q, to: G. Lindau & R. Sydow: Thesaurus Literaturae Mycologicae et Lichenologicae. Renzo Cortina, Viale Golgi 14, Pavia, Italy, 1959. (pp. 1479-2156).

Mycopathological bibliography

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H. J. Conert: Beiträge zur Monographie der Gattungen *Cleistogenes* und *Neyraudia*. Bot. Jb. 78(2): 208-245 (1959). (With keys, descriptions, and notes on anatomy).

J. W. Cribb: The *Gasteromycetes* of Queensland. V. *Octaviania* and *Hydnangium*. Univ. of Queensl. Papers, Dept. of Bot. III(25): 247-254 (1958). (An enumeration, with keys, new species, and illustrations of spores).

G. Cufodontis: Enumeratio plantarum Aethiopiae. *Spermatophyta* (seq.). Bull. Jard. Bot. Brux. 29 (Suppl.): 533-584 (1959). (*Malv., Bomb., Stercul.*).

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E. Petit: Les *Gaertnera* Lam. (*Rubiaceae*) de l'Afrique tropicale et spécialement du Congo Belge. Bull. Jard. Bot. Brux. 29(1): 37-53 (1959). (An enumeration of the African species, and a revision of the species from the Belgian Congo with a key).

R. E. Schultes: *Orchidaceae* Neotropicales V. Generis *Aganisiae* synopsis. Lloydia 21(2): 88-99 (1958). (With key, descriptions, illustrations, and citations of specimens).

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GRANT, VERNE — Natural History of the Phlox Family, Volume 1. Systematic Botany. International Scholars Forum, Sciences I; The Hague, Netherlands, Martinus Nijhoff 1959. D.fl. 19.—.

The author wants to treat the Phlox Family (*Polemoniaceae*) as a model of evolution in the Phanerogams. As a first step, this volume deals with the taxonomy of the family. Problems of classification are discussed, the general morphology of the family is outlined, a system of classification is given as well as a synopsis of genera. Furthermore some chapters are devoted to nomenclature, chromosome numbers, phylogeny and phytogeography. This book is not to be regarded as a taxonomic revision of the family, as one would have expected from the title; on the contrary, this is reserved for the future and not even a key to the genera, (let alone species) is given. Apart from this obvious deficiency, it contains a great deal of information, however, and it will certainly be useful for didactical purposes because of its general treatment of some of the more involved taxonomic problems which may face a botanist.

F. A. S.

* * *

ST. JOHN, HAROLD — Nomenclature of Plants. A text for the Application by the Case Method of the International Code of Botanical Nomenclature.

Chronica Botanica, New Series of Plant Science Books, The Ronald Press Company, New York, 157 pp. $ 2.50.

This book is designed for the training of students in the application of the International Code of Botanical Nomenclature. It consists of 900 "cases" giving bibliographic information on what are mostly more or less

involved nomenclatural puzzles. The solutions are *not* given and each teacher who uses this book will have to use his own judgment. The absence of these solutions makes it impossible to say whether the cases are well-chosen and whether this pertinent information has indeed been given completely.

At many universities professors of systematic botany will prefer to use original problems rather than pre-digested ones but for short courses in nomenclature this book may provide a valuable array of examples of the application of the Code.

F. A. S.

EXCERPTA BOTANICA

On the basis of the resolution passed at the VIII. Congrès International de Botanique at Paris 1954 and with the consent and cooperation of the I.A.P.T. it has been decided to publish an International Abstracting Journal which will review in a comprehensive manner the literature of systematic taxonomy and phytochorology.

The Gustav Fischer Verlag at Stuttgart will publish this abstracting journal on an international basis. It is not intended to compete with any of the existing abstracting journals but it is meant to cover as completely as possible certain disciplines that are incompletely dealt with by the existing journals.

The I.A.P.T. has decided to allow this publication to be published under its auspices and has given directions as to the choice of the members of the editorial committee and of the collaborators.

The first number will be published shortly.

The periodical will be published under the title of:

Excerpta Botanica
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It will cover the fields of Systematy in a wide sense and Phytochorology including the adjacent fields, such as Phylogeny, Taxonomical Palaeobotany, Taxonomical Palynology, Cytotaxonomy, etc. On the basis of international co-operation, the periodical will present as quickly and completely as possible lists of titles with reviews in 10 numbers per year. The subject-matter will be subdivided into special fields.

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AGNES CHASE

F. R. Fosberg and J. R. Swallen (Washington, D.C.)

The continued botanical activity of Dr. Agnes Chase after her ninetieth birthday, April 20, 1959, excites both admiration and humility in her many friends and colleagues. The example she sets, as did her eminent contemporaries, L. H. Bailey and Alice Eastwood, should, if followed by her juniors, result in an immense amount of work in systematic botany in addition to her own ample productions. It seems most appropriate to express this admiration while she is here to enjoy it.

Two recent honors have come to her, however belatedly, in recognition of her place as dean of living agrostologists. In June, 1958, the University of Illinois awarded her the honorary degree of Doctor of Science. On October 1 of the same year she was made an Honorary Fellow of the Smithsonian Institution, the eighth such Fellow in the history of the Institution. This honor was well merited, since she has spent practically her entire productive life in building up and using the magnificent grass collection of the U.S. National Herbarium, which is under the care of the Smithsonian.

The accompanying photograph, contributed by the Washington Post, was made on the occasion of the presentation of this award last fall.

The crowning achievement of the 60 year botanical career of Dr. Chase is the completion of an annotated index to all of the names published in the family Gramineae, a card catalog of over 80.000 cards, fully checked and verified. Her many friends sincerely hope that this catalog may be published and made available to systematic botanists while she is still here to see it. It is unthinkable that every effort should not be directed to this end.

This is also the place to express an appreciation for the unfailing kindness and helpfulness of Mrs. Chase toward any younger person who came to her for help or advice on grasses. In spite of the demands on her time and of her sense of the urgency of getting the herbarium in order and the Index finished, she always willingly drops what she is doing to identify a grass that has stumped the beginner or lesser worker and to explain the intricacies of the systematics of the enormous and difficult family Gramineae. This help to her colleagues will be, in the long run, not the least of her contributions to the science of systematic botany.

Further help to the beginners in the study of grasses is now made available by the recent publication by the Smithsonian Institution of a third edition of Mrs. Chase's First Book of Grasses. The Structure of Grasses explained for Beginners. i-xix, 1-127, Washington, 1959. This excellent little book is for sale by the Smithsonian Institution for three dollars.

Her friends and admirers wish for her many more birthdays and years of attention to the family of plants which will always bear the stamp of her critical work.

F. R. Fosberg

PLANT QUARANTINE & MYCOLOGICAL INSTITUTE
6 JUL 1959

The following biographical sketch and bibliography were prepared by Dr. Jason R. Swallen, Head Curator of Botany, U.S. National Herbarium.

BIOGRAPHICAL SKETCH OF DR. AGNES CHASE

Mrs. (Mary) Agnes Chase was born in Iroquois County, Illinois, April 20, 1869. She was educated in public and private schools in Chicago, and took extension courses from the Lewis Institute and the University of Chicago. She was married in January 1888 to William Ingraham Chase, who died a little less than a year later.

She became intensely interested in Botany at an early age, and while in Chicago worked at night as a proof-reader on the Interocean newspaper and botanized during the day. From 1901 to 1903 she was an assistant in Botany at the Field Museum of Natural History (now the Chicago Natural History Museum) where she worked with Charles Frederick Millspaugh in the preparation of the Gramineae, Cyperaceae, and Compositae for "Plantae Yucatanae." Each species was illustrated with line drawings prepared by Mrs. Chase.

In 1903 she was appointed a botanical illustrator in the U.S. Department of Agriculture. Outside of office hours she worked in the grass herbarium, then under the Department of Agriculture. During this time, she started a series of papers on the genera of the Paniceae, the first of which was published in December 1906.

Her professional career began in 1907 with her appointment as scientific assistant in systematic agrostology, a post she held until 1923 when she was made assistant botanist. Two years later, in 1925, she became associate botanist, and in 1936, after the death of Prof. A. S. Hitchcock, she was made senior botanist in charge of all systematic agrostology. Thus for nearly 30 years she was closely associated with Prof. Hitchcock. It is doubtful if Prof. Hitchcock could have accomplished as much as he did except for the constant interest and assistance given by Mrs. Chase. This is particularly true of the Manual of Grasses of the United States which was published only a short time before his death.

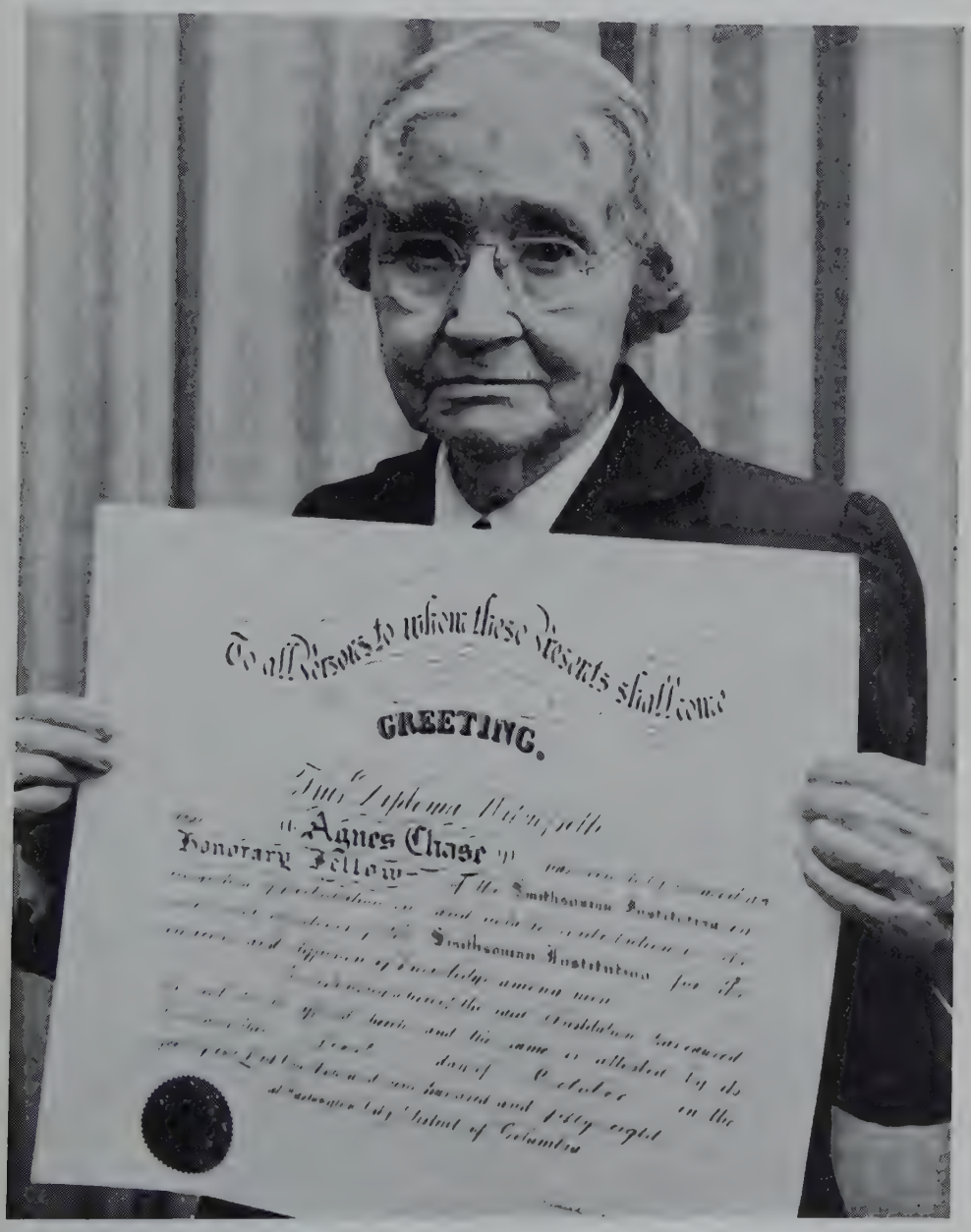
Mrs. Chase retired in April 1939, but did not give up her botanical work. The same year, she was appointed Research Associate in the Division of Plants (Department of Botany since 1947), U.S. National Museum, Smithsonian Institution. She has been at her desk nearly every day ever since, and often on Saturday as well. During this period, she completed two major projects: A revision of the "Manual of Grasses of the United States" and the preparation of a second copy of the index to grass species consisting of nearly 80.000 cards. Each card of the index was edited, verified, and when necessary, cross-indexed. There are tentative plans to have the index duplicated to make it available to other institutions and individuals.

Mrs. Chase was not a "closet botanist," but realized the need and advantage of studying grasses in the field. She collected extensively in the local area during her early years in Washington, and made several trips through the Southeastern States, the latter for studying species of Panicum. At the time, a revision of the North American species was being prepared jointly with Prof. Hitchcock. The revision was published in 1910, and has remained a standard reference work. Two extended collecting trips were made to Brazil, the first in 1924-25, the second in 1929-30. Other collecting trips were to Puerto Rico in 1913, and to Venezuela in 1940, the latter made at the request of the Venezuelan Ministry of Agriculture.

For the purpose of studying types of American grasses, she visited botanical institutions in various European cities in 1922, including Vienna, Munich, Florence, Pisa, Geneva, Berlin, Leiden, Brussels, Paris, and London. The results of these studies have been invaluable in American agrostology.

Mrs. Chase enjoys essentially a world-wide reputation. She has been in contact

with other agrostologists in Europe, Asia, South America, and Australia, continually for many years. She has assisted students from Argentina, Chile, Venezuela, Brazil, China, Canada, and the Philippines, who have spent extended periods of time studying grasses in the U.S. National Herbarium. Most of these students have continued their agrostological work in their own countries. As a further indication



Washington Post Photo

of the high esteem in which she is held by botanists, she was selected as one of the fifty botanists to receive a Certificate of Merit at the fiftieth anniversary of the founding of the Botanical Society of America in 1956. These persons were judged to have made outstanding contributions in botanical science. The statement made of her was "one of the world's outstanding agrostologists and preeminent among American students in this field."

A complete bibliography follows.

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Papuan grasses collected by L. J. Brass. 2. Journ. Arn. Arb. 24: 77-89. 1943.

New grasses from South America. Journ. Washington Acad. Sci. 33: 316-317. 1943.

1944

Grasses of Brazil and Venezuela. Agriculture in the Americas 4: 123-126, with illus. 1944.

1946

Enneapogon Desvauxii and Pappophorum Wrightii, an agrostological detective story. Madrono 8: 187-189. 1946.

1950

Pogonatherum Beauv. Journ. Arn. Arb. 31: 130-132. 1950.

1951

Revision, Manual of the Grasses of the United States (A. S. Hitchcock). Miscl. Pub. 200, U.S. Dept. Agric. Feb. 1951.

(with Sampson, Arthur W. and Hedrick, Donald W.) California grasslands and range forage grasses. Univ. Calif. Exp. Sta. Rep. 724: 5-131. 1951.

1952

New species of grasses from Venezuela. Journ. Washington Acad. Sci. 42(4): 122-124. 1952.

J. R. Swallen

WHAT IS A TYPE?

A. A. Bullock (Kew) and R. Ross (London)

In Article 7 of the current Code the following appears:

"A nomenclatural type (*typus*) is that constituent element of a taxon to which the name of the taxon is permanently attached, whether as an accepted name or as a synonym.

"Note 1. The nomenclatural type is not necessarily the most typical or representative element of a taxon: it is merely that element with which the name is permanently associated.

"Note 2. A *holotype* ('type') is the one specimen or other element used by the author or designated by him as the nomenclatural type....

"Note 3. ....

"A *lectotype* is a specimen or other element selected from the original material to serve as nomenclatural type ...."

Article 8, which is also relevant, reads:

"The choice of a lectotype .... is superseded .... if it can be shown that the choice was based upon a misinterpretation of the original description."

This latter article and the extracts quoted from Art. 7, Notes 2 and 3 are the only indication in the Code itself of how a specimen [1] or other element becomes permanently associated with a name. The only interpretation that they will bear, however, is that the permanent association stems from the use of the specimen or other element in the preparation of the indication of the characters of the taxon to which the name is applied. As we see from Chap. IV, Sect. 2, that indication may be a description [2] or, in certain special cases, either an illustration or both

[1] "Specimen" is not defined in the Code. We take it to mean in this context a plant or part of a plant, whether preserved or not.

[2] In the Code, and throughout this paper, the term "description" refers not only to a full description but also to a definition or a diagnostic phrase-name for a species, although early writers, including Linnaeus, would have regarded the two as distinct.

an illustration and a description, and it may have been prepared by the author of the name for publication with the name, or it may have been published previously and only referred to by the author of the name. This interpretation is reinforced by Appendix IV, the guide to the determination of types.

The type method was, and is, designed to provide a machinery to eliminate arbitrary and subjective judgments as to the taxon to which a name should be applied. Unless a name is attached to an effectively published indication (description or illustration or both) of the characters of the taxon to which it is applied, it has no status in botanical nomenclature. This indication is normally based on one specimen or a number of specimens, and the type method consists of using this specimen or a particular one of these specimens as the standard by which the indication is clarified, supplemented, or even amended, when there is any doubt about what is indicated. This specimen is the type, and it must clearly have been before the original author as he prepared the indication[3]; there cannot otherwise be any certainty that the indication, and the name, apply to it.

In the case of taxa of a rank higher than species, the types are, according to the definition in the Code, not specimens but taxa of lower rank, but this does not affect the argument of the previous paragraph, for they are in effect specimens at one or more removes. However, when the descriptions which are attached to and validate the publication of some names were drawn up, the material was not, or was not only, plant specimens. Often Linnaeus and various of his successors compiled descriptions from an account or accounts in earlier literature in which there are no names with a status in botanical nomenclature, or from an illustration, or from a combination of both, with or without plant specimens in addition. When there was no specimen, the previously published account or the illustration, or one of these, is the type, for it is on this, and not on any actual specimen, that the validating description is based. Similarly, even when the elements on which the description was based include a specimen or specimens in addition to a previously published account or an illustration, the latter may be taken as the type if it was the most important element used in the drafting of the description (cf. e.g. *Euadenia? kirkii* Oliv., Flor. Trop. Afr. 1: 91. 1868, where the main part of the description is based on a drawing and field notes, not on the fruiting specimen which Oliver had before him also). It is because there are a number of such cases that Silva's proposed amendment to Art. 10, (Syn. Prop. Montreal. Art. 10. Prop. B) acceptance of which would result in the article stating that only a specimen could be the type of a species, cannot, consistently with the facts, be assented to. The descriptions or figures that are the types of such names are, however, to be interpreted, like those that validate names, by reference to the specimens on which they were based, and hence these specimens (for which J. E. Dandy has coined the term "typotype", cf. Stearn, Intr. Linn., Sp. Pl., Facs. Ed. Ray Soc.: 129. 1957) act as types just as if they had actually been used in preparing the validating description.

In early works, and very often in Linnaeus' *Species Plantarum*, the description attached to a binomial name was not drawn up when the work was being prepared but is a diagnostic phrase taken unaltered, or virtually so, from a previously published work to which a reference is given. In such cases the author of the name may or may not have had a specimen as well as the earlier literature before him, but whether he did or not the description was not in any way based on that specimen, and such a specimen cannot be the type. As A. S. Hitchcock, who was primarily responsible for the introduction of the modern type method into botanical nomenclature, said (Methods descr. syst. Bot.: 141. 1925): "It is clear that a specimen received after

[3] Except in the rare cases where descriptions were written from memory or hearsay.

the description [*n.b.* not the name] was published can not be the type even though the sheet may bear the name in the author's hand." The type must be a specimen used in the preparation of the description in the earlier work referred to.

It might be thought that all this exposition is unnecessary, being no more than a statement of what is generally accepted. However, thinking it would be well to make explicit what is implicit in the Code, we proposed the following addition to Art. 7, Note 1 (Syn. Prop. Montreal, Art. 7, Prop. F): "It is the element or one of the elements upon which the description (and/or illustration) giving the name valid publication is based." (Second thoughts suggest that this addition would be better placed as the last sentence of the article proper, i.e. after "as a synonym"). On this proposal the Rapporteur (op. cit.) made the following comment:

"The adoption of *proposal F* is not recommended. Where for instance Linnaeus validates a name by reference to a pre-linnean description and supplies no description of his own, but at the same time had a type specimen himself, this type specimen will always prevail over the pre-linnean description and even over the type-specimen of that description if it exists. The wording of the proposal is, therefore, too ample."

As will be realised, that statement, literally interpreted, is in contradiction with what has been said above about the application of the type method, and one wonders whether it accurately represents his opinions. In such a case the specimen Linnaeus had could not be a type specimen unless the earlier "pre-linnean" description, e.g. in *Flora Suecica*, was also based on it. We presume that the Rapporteur is only considering cases where Linnaeus had a specimen before him when writing the work in which the binomial name appears but nevertheless identified it with a description in an earlier work, perhaps one of his own published before 1753, and merely cited that description without preparing a new one; no-one would consider as type anything that came into his hands after the name was published. It might be held that in such cases, if there be any, Linnaeus, having ascertained that a particular description fitted his specimen, took it over for that specimen and did not bother to write another. This is, however, too specious an argument to prevail against the general principles of the type method as set out above. All the evidence suggests, moreover, that when Linnaeus had a specimen before him he wrote a new description based on it or so considerably amended or supplemented a previously published one that it in effect became a new one. There may be occasional exceptions but, if there are any, they are very few and the work copied from was one of his own or one with which he had been closely concerned. He was only prepared to accept descriptive specific names prepared according to his own methods, e.g. by Gronovius, Royen, and Sauvages, and normally wrote new ones to replace those of authors who had not been his associates or accepted his ideas, even when he had no other material than their illustration or description (cf. *Aspalathus astroites*, *A. chenopoda*, etc., Sp. Pl. 2: 711) [4]. The Rapporteur's objection to our proposal thus refers to a hypothetical case not known with certainty to exist.

In many cases all the specimens upon which the indication attached to a name was based have been lost or were never preserved. It is then necessary, in a critical consideration of the application of the name, to interpret the protologue (cf. Stearn, op. cit.: 126, *adnot.* and Syn. Prop. Montreal. Art. 17, Prop. G, *adnot.*) as best one

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[4] Note by W. T. Stearn: Linnaean diagnoses (phrase-names) are designed to function like the contrasts of modern keys; each one is carefully and concisely phrased to contrast with diagnoses before and after. Hence Linnaeus could rarely have adopted the diagnoses of other authors even if he had wished to do so because they would not have fitted into this system, and he was therefore under the necessity of drafting his own, which he had to do from specimens, figures, or descriptions.

may, paying particular attention to further specimens from the type locality, if available. The botanist who does this will normally select a particular specimen and designate it as a standard of his application of the name, just as nowadays the author of a new name designates a specimen from amongst his original material as the type. This standard specimen, however, has none of the authority that attaches to a part of the original material, for it does no more than exemplify the later botanist's opinion about the original application of the name; the name is in no way permanently attached to it, and any further student of the group concerned must review critically the correctness of his predecessor's judgment and is free to differ from it. It is in our view unfortunate and misleading that specimens of this sort are called *neotypes*, for that suggests that they have the same sort of authority as a part of the original material has. They should rather be designated by some such term as *standard specimens*, or *exemplars*, that does not carry such an implication. This line of reasoning is the basis of our Art. 7, Prop. H, the rejection of which is also recommended by the Rapporteur.

In conclusion, we wish to thank our colleagues Messrs. J. E. Dandy, A. W. Exell, and W. T. Stearn for assistance and advice in the drafting of this note.

NOMINA FAMILIARUM CONSERVANDA PROPOSITA

A. A. Bullock (Kew)

I have to thank many correspondents for references and suggestions following the publication in Taxon of my provisional list of family names. Very brief examination of that list shows that there is a considerable overlap of names if one takes into account the circumscription of each of them and it is also clear that the application of the type method renders accurate citation a major undertaking.

Following conversations with Dr. H. W. Rickett and Dr. F. A. Stafleu during their visit to Kew in the summer of 1958 I have prepared an arbitrary list of names which botanists may feel disposed to accept for conservation. It includes the families accepted by Hutchinson in the second (1959) edition of his "Families of Flowering Plants", with the addition of a number of families which he has not, for one reason or another, accepted. The delimitation of families will always depend upon the relative weight given to the various differential criteria available and is a taxonomic consideration. For the purpose of this list, the objective considerations of nomenclature have been given first place.

It was not thought to be necessary to give corresponding *nomina rejicienda*. Any name which is not included in this list, and which competes for priority by either nomenclatural or taxonomic synonymy, is to be regarded as rejected. Also, any earlier publication of the same name (by correction, if necessary, in accordance with Art. 18, note 1 of the Paris Code) is to be regarded as a rejected homonym. On the other hand, certain names that are included in the list may be regarded as synonymous under some classifications. These will compete with each other on a simple basis of priority. Thus if *Ericaceae* and *Vacciniaceae* are united, the correct name for the combined family will be *Ericaceae*. An exception to this rule is proposed in order to retain the name *Celastraceae* when that family is united with *Hippocrateaceae*, as well as a provision to ensure the retention of *Clusiaceae* when that family (alt. name *Guttiferae*) is united with *Hypericaceae*.

If names not included in the list are required in certain classifications, the simple application of the Code will be sufficient to ensure correct usage. Most of such

names, it is thought, will be found to be of fairly recent origin and it is unlikely that any serious bibliographic or nomenclatural difficulties will be encountered, since the families concerned will be small and very strictly circumscribed.

Although additions to this list are possible, it has been made long deliberately in order to avoid difficulties in the future. Further subdivision of the phanerogams into more and more families is always a possibility as more discontinuities in character-variation are discovered or as more weight is given to discontinuities that previously have been held to be trivial from the point of view of classification. The oft-debated value of dividing *Leguminosae* (*Fabaceae*) into three families — *Papilionaceae* (*Fabaceae*), *Caesalpiniaceae* and *Mimosaceae* — is a good example. The three families are invariably classified in a group sharply separated from all other flowering plants and only the rank and exact delimitation of the three constituents is questioned. Those who prefer union of the three parts into one family point to the fact that it is not easy to place certain genera into one of two parts; those who prefer three families point to the unmanageable size of the three together and the great divergence of form between *Vicia*, *Mimosa* and *Caesalpinia*.

Reference of the families in the list to their positions and (so far as is possible) rank, in the systems of Bentham and Hooker (*Genera Plantarum*, 1862-83), Engler and Prantl (*Natürlichen Pflanzenfamilien*, ed. 1 and ed. 2) and Hutchinson (*Families of Flowering Plants*, ed. 2. 1959) constitutes an attempt, not always successful, to make the entries in the list mutually exclusive, * but there is so much overlapping of family limits in the different systems that only partial success is possible without making the references too cumbersome. Hutchinson's (1959) system, admitting a greater number of families than either of the other two, has been regarded as more or less basic for this list, whilst the others have been, in the main, related to it. The references are to be taken as no more than a guide and they are without taxonomic significance in relation to the writer's personal opinion. The abbreviations "B.H.", "E.P." and "Hutch." have been used throughout for the three works, whilst I.C.B.N. and I.N.G. refer respectively to the Paris (1956) edition of the Code, and to *Index Nominum Genericorum*. The first edition of the Pflanzenfamilien is not as a rule cited when the family concerned has been included in the published volumes of the second edition, though there is, as may be expected, a considerable difference between them. The tendency has been, however, to increase the number of families rather than to divide them into subfamilies and tribes. It is necessary to add, in this connection, that the original circumscription of the families has been neglected; this is because most of them were named at a time when relatively few of the genera were known and when phylogenetic considerations had little or no weight, whilst the facts of ontogeny were largely unknown. Even now the fact that finally similar structures may arise in different ways is not always sufficiently taken into account.

References to Engler's Pflanzenreich have not, as a rule, been included since that work does not embody a complete system. There is a very complete index to it by M. T. Davis in Taxon 6 (6): 161-182 (1957).

As in my *prodromus* of family names (Taxon 7 (1): 1-35, and 7 (6): 158-163. 1958), I have taken Jussieu, *Genera Plantarum*, 1789, as a convenient early starting point for the nomenclature of families. It may be thought, in view of all the difficulties of correlation of different authors' work that a more recent starting point might be better. I remain convinced that an earlier one is not practicable since the

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* This is sometimes achieved by stating the parts of a named family included in the work, at other times by excluding those parts referred to other families. When such methods are too cumbersome, attention is drawn to excluded parts by simply using the expression *pro parte*, abbreviated to "p.p."

influence of the Linnaean "classes" was then much too strong. Further, it was the elaboration of Jussieu's system that led to the system of Decandolle's *Prodromus* and hence to that of Bentham and Hooker; independent modifications led to Lindley's system (1830 onwards) and to Endlicher's system; the last, modified by phylogenetic speculations following the advent of the Darwinian era, led to the system of Engler and Prantl and finally to the phylogenetic systems * of Bessey and, later, of Hutchinson.

The citation of the type species of the generic names of the family types was thought to be of some value. Most of the genera concerned were monotypic when described; these, and others with an indicated holotype, are cited without comment. Lectotypes are cited in a manner similar to that of *Index nominum genericorum.*

Finally, I wish to thank my colleagues for a great deal of constructive criticism and helpful advice, particularly N. Y. Sandwith, R. D. Meikle and H. K. Airy-Shaw at Kew, and J. E. Dandy and W. T. Stearn at the British Museum **.

Acanthaceae *A. L. de Jussieu,* Gen. Pl. 102. 1789 ('*Acanthi*').
T.: *Acanthus* Linnaeus [*A. mollis* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 170. 1929. — I.N.G. 1/01009]
B.H. 2: 1060. 1876. — *Acanthaceae.*
E.P. 4 (3b): 274. 1895 (Lindau). — *Acanthaceae.*
Hutch. (1): 489. 1959. — *Acanthaceae.*

Aceraceae *A. L. de Jussieu,* Gen. Pl. 251. 1789 ('*Acera*').
T.: *Acer* Linnaeus [*A. pseudoplatanus* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 193. 1929. — I.N.G. 10/02004]
B.H. 1: 391. 1862. — *Sapindeae* subordo *Acerineae,* p.p.
E.P. 3 (5): 263. 1893 (Pax). — *Aceraceae.*
Hutch. (1): 364. 1959. — *Aceraceae.*

Achariaceae *Harms* in Engler et Prantl, Nat. Pflanzenfam. Nachtr. 256. 1897.
T.: *Acharia* Thunberg [*A. tragodes* Thunberg]
B.H. 1: 809. 1867. — *Passifloreae* tribus *Achariеae.*
E.P. 3 (6a): 92. 1893 (Harms). — *Passifloraceae* tribus *Achariеae.* — Ed. 2. 21: 507. 1925 (Harms). — *Achariaceae.*
Hutch. (1): 241. 1959. — *Achariaceae.*

Achatocarpaceae *Heimerl* in Engler et Prantl, Nat. Pflanzenfam. ed. 2. 16c: 174. 1934.
T.: *Achatocarpus* Triana [*A. nigricans* Triana]
B.H. 3: 21. 1880. *Amarantaceae* tribus *Amaranteae,* p.p.
E.P. 3 (1b): 1. 1889; et Nachtr. 154. 1897 (Engler). — *Phytolaccaceae,* p.p. — Ed. 2. 16c: 174. 1934 (Heimerl). — *Achatocarpaceae.*
Hutch. (1): 210. 1959. — *Achatocarpaceae.*

Actinidiaceae *J. Hutchinson,* Fam. Fl. Pl. 1: 177. *fig. 112.* 1926 [*van Tieghem,* Journ. de Bot. 13: 173. 1899 ('*Actinidiacées*')].
T.: *Actinidia* Lindley [*A. callosa* Lindley]
B.H. 1: 179. 1862. — *Ternstroemiaceae* tribus *Sauraujeae,* p.p.
E.P. 3 (6): 110, 125. 1893 (Gilg). — *Dilleniaceae* subfam. *Actinidioideae* tribus *Actinidieae.* — Ed. 2. 21: 36. 1925 (Gilg et Werdermann). — *Actinidiaceae* subfam. *Actinidioideae* et subfam. *Clematoclethroideae.*
Hutch. (1): 274. 1959. — *Actinidiaceae.*
Gilg (in E.P. Nachtr. 2. 44. 1900) admitted the subfamily *Clematoclethroideae,* with the single genus *Clematoclethra* Maximowicsz.

Adoxaceae *J. G. Agardh,* Theoria Syst. Pl. Fam. Phan. 77. 1858.
T.: *Adoxa* Linnaeus [*A. moschatellina* Linnaeus]
B.H. 2: 2. 1873. — *Caprifoliaceae* tribus *Sambuceae,* p.p.
E.P. 4 (4): 170. 1891 (K. Fritsch). — *Adoxaceae* (et *l.c.* 190, auct. Engler).
Hutch. (1): 466. 1959. — *Adoxaceae.*

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* All such systems must be speculative and the use of the term merely indicates that an attempt to arrange the various groups in a logical manner following definite, though putative, evolutionary sequences, has been made.

**I am again indebted to Dr. G. Buchheim, who has most carefully scrutinized the typescript; it has been possible to make many of his corrections in proofreading these pages.

Aegicerataceae *Blume,* Ann. Sc. Nat. sér. 2. 2: 97. 1834 ('*Aegicereae*').
T.: *Aegiceras* J. Gaertner [*A. majus* J. Gaertner, lectotypus]
B.H. 2: 642. 1876. — *Myrsineae* tribus *Eumyrsineae,* genus anomalum.
E.P. 4 (1): 97. 1890 (Pax). — *Myrsinaceae* subfam. *Aegiceratoideae.*
Hutch. (1): 347. 1959. — *Aegicerataceae.*

Aextoxicaceae *Pax,* Jahresb. Schles. Ges. Breslau 94 (2): 17-21. 1917.
T.: *Aextoxicon* Ruiz et Pavon [*A. punctatum* Ruiz et Pavon; I.N.G. 10/06715]
B.H. 3: 247. 1880. — *Euphorbiaceae* tribus *Phyllantheae,* p.p.
E.P. 3 (5): 27. 1890 (Pax). — *Euphorbiaceae* subfam. *Phyllanthoideae* tribus *Phyllantheae* subtribus *Antidesminae,* p.p.
Hutch. (1): 318. 1959. — *Aextoxicaceae.*

Agavaceae *Endlicher,* Ench. Bot. 105. 1841 ('*Agaveae*').
T.: *Agave* Linnaeus [*A. americana* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 147. 1929]
B.H. 3: 715. 1883. — *Amaryllideae* tribus *Agaveae.*
E.P. Ed. 2. 15a: 418. 1930 (Pax et K. Hoffmann). — *Amaryllidaceae* subfam. *Agavoideae.*
Hutch. (2): 662. 1959. — *Agavaceae.*
Although representing the same taxon, the name *Agavineae* as originally validly published by Dumortier (1829) was illegitimate. The name *Agaveae* was used in the modern sense by Salisbury (1812), but without definition.

Agdestidaceae *Nakai,* Journ. Jap. Bot. 18: 104. 1942.
T.: *Agdestis* A. P. Decandolle [*A. clematidea* A. P. Decandolle]
B.H. 3: 87. 1883. — *Phytolaccaceae,* genus anomalum.
E.P. Ed. 2. 16c: 158. 1934 (Heimerl). — *Phytolaccaceae* tribus *Agdestideae.*
Hutch. (1): 437. 1959. — *Agdestidaceae.*
Decandolle (Syst. Veg. 1: 543. 1818), in spite of the bisexual flowers of *Agdestis,* referred the genus to *Menispermaceae.*

Aizoaceae *J. G. Agardh,* Theoria Syst. Pl. Fam. Phan. 353. 1858 [*Sprengel,* Anl. ed. 2. 2(2): 842. 1818 ('*Aizoiden*')].
T.: *Aizoon* Linnaeus [*A. canariense* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 159. 1929]
B.H. 1: 851. 1867. — *Ficoideae,* excl. tribus *Mollugineae.*
E.P. Ed. 2. 16c: 179. 1934 (Pax et K. Hoffmann). — *Aizoaceae,* excl. tribus *Mollugineae.*
Hutch. (1): 430. 1959. — *Ficoidaceae.*
The next earliest use of the name *Aizoaceae* (as '*Aizoideae*') was by Reichenbach (Fl. Germ. Excurs. 575. 1830-32) who included in it *Chenopodiaceae* and *Amaranthaceae.*

Akaniaceae *Stapf,* Kew Bull. 1912: 380. 1912.
T.: *Akania* J. D. Hooker [*A. hillii* J. D. Hooker]
B.H. 1: 409. 1862. — *Sapindaceae* subordo '*Sapindeae*', p.p.
E.P. Nachtr. 4. 192. 1914 (Pilger et K. Krause). —Ed. 2. 19bl: 173. 1940 (Harms). — *Akaniaceae.*
Hutch. (1): 368. 1959. — *Akaniaceae.*

Alangiaceae *A. P. Decandolle,* Prodr. 3: 203. 1828 ('*Alangieae*').
T.: *Alangium* Lamarck, nom. cons. [*A. salviifolium* (Linnaeus f.) Wangerin; I.C.B.N. 261. 1956]
B.H. 1: 949. 1867. — *Cornaceae,* p.p.
E.P. 3 (8): 255, 260. 1898 (Harms). — *Cornaceae* subfam. *Alangioideae.*
Hutch. (1): 173. 1959. — *Alangiaceae.*
The subfamily *Alangioideae* was raised to family rank by Engler, Syll. Pflanzenfam. ed. 6. 179. 1909, and monographed by Wangerin in Engler's Pflanzenreich in 1910.

Alismataceae *Ventenat,* Tabl. Regne Vég. 2: 157. 1799 ('*Alismoideae*').
T.: *Alisma* Linnaeus [*A. plantago-aquatica* Linnaeus; vide Britton et Brown, Ill. Fl. ed. 2. 1: 93. 1913. — Hitchcock, Prop. Brit. Bot. 149. 1929)]
B.H. 3: 1004. 1883. — *Alismaceae* tribus *Alismeae.*
E.P. 2 (1): 227. 1889 (Buchanau). — *Alismaceae.*
Hutch. (2): 542. 1959. — *Alismataceae.*
Buchanau (1900) used the correct form *Alismataceae* in E.P. Nachtr. 2. 2, but (1906) returned to the incorrect *Alismaceae* in Nachtr. 3. 9.

Alliaceae *J. G. Agardh,* Theoria Syst. Pl. Fam. Phan. 32. 1858.
T.: *Allium* Linnaeus [*A. sativum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 145. 1929]

B.H. 3: 756. 1883. — *Liliaceae* tribus *Allieae*, p.p.
E.P. Ed. 2. 15a: 318. 1930 (K. Krause). — *Liliaceae* subfam. *Allioideae* tribus *Allieae*.
Hutch. (2): 642. 1959. — *Amaryllidaceae* tribus *Allieae*.

Alstroemeriaceae *Dumortier*, Anal. Fam. Pl. 57, 58. 1829.
T.: *Alstroemeria* Linnaeus [*A. pelegrina* Linnaeus; vide Bullock, Kew Bull. 1959: ined.]
B.H. 3: 715. 1883. — *Amaryllideae* tribus *Alstroemerieae*.
E.P. Ed. 2. 15a: 424. 1930 (Pax et K. Hoffmann). — *Amaryllidaceae* subfam. *Hypoxidoideae* tribus *Alstroemerieae*.
Hutch. (2): 623. 1959. — *Alstroemeriaceae*.

Amaranthaceae *A. L. de Jussieu*, Gen. Pl. 87. 1789 ('*Amaranthi*').
T.: *Amaranthus* Linnaeus [*A. caudatus* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 188. 1929]
B.H. 3: 20. 1880. — *Amarantaceae* (excl. *Achatocarpaceae*).
E.P. Ed. 2. 16c: 7. 1934 (Schinz). — *Amaranthaceae*.
Hutch. (1): 440. 1959. — *Amaranthaceae*.

Amaryllidaceae *Jaume St.-Hilaire*, Expos. Fam. Nat. 1: 134. *t. 11.* 1805 ('*Amarylli-deae*').
T.: *Amaryllis* Linnaeus [*A. bella-donna* Linnaeus; vide Dandy et Fosberg, Taxon 3: 231. 1954]
B.H. 3: 712, 756. 1883. — *Amaryllideae* tribus *Amarylleae*, p.p.
E.P. Ed. 2. 15a: 391. 1930 (Pax et K. Hoffmann). — *Amaryllidaceae* subfam. *Amaryllidoideae*, et loc. cit. 317 (K. Krause), — *Liliaceae* subfam. *Allioideae*, p.p.
Hutch. (2): 639. 1959. — *Amaryllidaceae*, excl. tribus *Allieae*.
See also *Alliaceae*.

Anacardiaceae *Lindley*, Introd. Nat. Syst. 127. 1830.
T.: *Anacardium* Linnaeus [*A. occidentale* Linnaeus]
B.H. 1: 415. 1862. — *Anacardiaceae*.
E.P. 3 (5): 138. 1892 (Engler). — *Anacardiaceae*, excl. tribus *Dobineeae*.
Hutch. (1): 363. 1959. — *Anacardiaceae*.
The tribe *Dobineeae* of Engler is the family *Podoaceae* of this list. The name *Anacardieae* was used by R. Brown in 1818, but only as a synonym. The family is part of the *Terebintaceae* of Jussieu (1789) and later authors.

Ancistrocladaceae *Planchon*, Ann. Sc. Nat. sér. 3. 13: 316. 1849 ('*Ancistrocladeae*').
T.: *Ancistrocladus* Planchon, nom. cons. [*A. hamatus* (Vahl) Gilg; vide I.C.B.N. 257. 1956]
B.H. 1: 190, 191. 1862. — *Dipterocarpeae*, p.p.
E.P. Ed. 2. 21: 589. 1925 (Gilg). — *Ancistrocladaceae*.
Hutch. (1): 286. 1959. — *Ancistrocladaceae*.

Annonaceae *A. L. de Jussieu*, Gen. Pl. 283. 1789 ('*Anonae*').
T.: *Annona* Linnaeus (*A. muricata* Linnaeus; vide Safford, Contrib. U.S. Nat. Herb. 18: 1. 1914. — M. L. Green, Prop. Brit. Bot. 163. 1929]
B.H. 1: 20. 1862. — *Anonaceae*.
E.P. 3 (2): 23. 1888 (Prantl). — *Anonaceae*.
Hutch. (1): 133. 1959. — *Annonaceae*.

Antoniaceae *J. Hutchinson*, Fam. Fl. Pl. ed. 2. 375. *fig. 228.* 1959.
T.: *Antonia* Pohl [*A. ovata* Pohl]
B.H. 2: 788. 1876. — *Loganiaceae* tribus *Eulogancieae* subtribus *Antonieae*.
E.P. 4 (2): 35. 1892 (Solereder). — *Loganiaceae* subfam. *Loganioideae* tribus *Antonieae*.
Hutch. (1): 375. 1959. — *Antoniaceae*.

Apiaceae *Lindley*, Nat. Syst. ed. 2. 21. 1836. — Nom. alt.; *Umbelliferae*.
T.: *Apium* Linnaeus [*A. graveolens* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 142. 1929. — I.N.G. 21/03689]
B.H. 1: 859. 1867. — *Umbelliferae*.
E.P. 3 (8): 63. 1897-8 (Drude). — *Umbelliferae*.
Hutch. (1): 471. 1959. — *Umbelliferae*.

Apocynaceae *A. L. de Jussieu*, Gen. Pl. 143. 1789 ('*Apocineae*').
T.: *Apocynum* Linnaeus [*A. androsaemifolium* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 136. 1929]
B.H. 2: 681. 1876. — *Apocynaceae*.
E.P. 4 (2): 109. 1895 (Schumann). — *Apocynaceae*.
Hutch. (1): 380. 1959. — *Apocynaceae*.

Aponogetonaceae *Planchon*, Ann. Sc. Nat. sér. 3. 1: 119. 1844 ('*Aponogetaceae*').

T.: *Aponogeton* Linnaeus f. [*A. monostachyon* Linnaeus f.]
B.H. 3: 1011. 1883. — *Naiadaceae* tribus *Aponogetoneae.*
E.P. 2 (1): 218. 1889 (Engler). — *Aponogetonaceae.*
Hutch. (2): 552. 1959. — *Aponogetonaceae.*
Aponogeton Linnaeus f. (1781) is a later homonym of the illegitimate *Aponogeton* Hill (1756), and requires to be conserved.

Apostasiaceae *Lindley,* Nixus Pl. 22. 1833 ('*Apostasieae*').
T.: *Apostasia* Blume [*A. odorata* Blume]
B.H. 3: 635. 1883. — *Orchideae* tribus *Cypripedieae,* p.p.
E.P. 2 (6): 80. 1889 (Pfitzer). — *Orchidaceae,* subtribus *Apostasiinae.*
Hutch. (2): 680. 1959. — *Apostasiaceae.*
The name *Apostasieae* was introduced by Lindley (1833) in his *Nixus Plantarum,* but without separate definition.

Aptandraceae *Gagnepain ex Pilger et K. Krause* in Engler et Prantl, Nat. Pflanzenfam. Nachtr. 4: 74. 1914 [*van Tieghem,* Bull. Soc. Bot. France 43: 568. 1896 ('*Aptandracées*')].
T.: *Aptandra* Miers [*A. spruceana* Miers]
B.H. 1: 345. 1862. — *Olacineae* tribus *Olaceae,* p.p.
E.P. Ed. 2. 16b: 28. 1935 (Sleumer). — *Olacaceae* subfam. *Olacoideae* tribus *Aptandreae.*
Hutch. (1): 332. 1959. — *Aptandraceae.*
See also Gagnepain, Bull. Soc. Bot. France 57: 373-380 (1910).

Aquifoliaceae *Bartling,* Ord. Nat. Pl. 228, 376. 1830.
T.: *Ilex* Linnaeus (syn. *Aquifolium* P. Miller, nom. illeg.) [*I. aquifolium* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 126. 1929]
B.H. 1: 355. 1862. — *Ilicineae.*
E.P. Ed. 2. 20b: 36. 1942 (Loesener). — *Aquifoliaceae.*
Hutch. (1): 311. 1959. — *Aquifoliaceae.*

Aquilariaceae *A. P. Decandolle,* Prodr. 2: 59. 1825 ('*Aquilarineae*').
T.: *Aquilaria* Lamarck, nom. cons. [*A. malaccensis* Lamarck; vide I.C.B.N. 257. 1956]
B.H. 3: 188. 1880. — *Thymelaeaceae* tribus *Aquilarieae.*
E.P. 3 (6a): 223. 1894 (Gilg). — *Thymelaeaceae* subfam. *Aquilarioideae.*
Hutch. (1): 213. 1959. — *Aquilariaceae.*

Araceae *A. L. de Jussieu,* Gen. Pl. 23. 1789 ('*Aroideae*').
T.: *Arum* Linnaeus [*A. maculatum* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 186. 1929]
B.H. 3: 955. 1883. — *Aroideae.*
E.P. 2 (3): 102. 1889 (Engler). — *Araceae.*
Hutch. (2): 627. 1959. — *Araceae.*

Araliaceae *A. L. de Jussieu,* Gen. Pl. 217. 1789 ('*Araliae*').
T.: *Aralia* Linnaeus [*A. racemosa* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 143. 1929]
B.H. 1: 931. 1867. — *Araliaceae.*
E.P. 3 (8): 1. 1894-97 (Harms). — *Araliaceae.*
Hutch. (1): 177. 1959. — *Araliaceae.*

Arecaceae *C. H. Schultz,* Nat. Syst. Pflanzenr. 317. 1832. — Nom. alt.; *Palmae.*
T.: *Areca* Linnaeus [*A. catechu* Linnaeus]
B.H. 3: 870. 1883. — *Palmae.*
E.P. 2 (3): 1. 1889 (Drude). — *Palmae.*
Hutch. (2): 665. 1959. — *Palmae.*

Aristolochiaceae *A. L. de Jussieu,* Gen. Pl. 72. 1789 ('*Aristolochiae*').
T.: *Aristolochia* Linnaeus [*A. rotunda* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 186. 1929]
B.H. 3: 121. 1880. — *Aristolochiaceae.*
E.P. Ed. 2. 16b: 204. 1935 (O. C. Schmidt). — *Aristolochiaceae.*
Hutch. (1): 414. 1959. — *Aristolochiaceae.*

Asclepiadaceae *R. Brown,* Mem. Wern. Soc. 1: 12. 1809 ('*Asclepiadeae*').
T.: *Asclepias* Linnaeus [*A. syriaca* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 136. 1929. — I.N.G. 30/03717]
B.H. 2: 728. 1876. — *Asclepiadeae* subordo *Euasclepiadeae.*
E.P. 4 (2): 189. 1895 (Schumann). — *Asclepiadaceae* subfam. *Cynanchoideae.*
Hutch. (1): 383. 1959. — *Asclepiadaceae.*

Asparagaceae *A. L. de Jussieu,* Gen. Pl. 40. 1789 ('*Asparagi*').
T.: *Asparagus* Linnaeus [*A. officinalis* Linnaeus; vide Britton et Brown, Ill. Fl. ed. 2. 1: 513. 1913]
B.H. 3: 751. 1883. — *Liliaceae* tribus *Asparageae.*
E.P. Ed. 2. 15a: 362. 1930 (K. Krause). — *Liliaceae* tribus *Asparageae.*
Hutch. (2): 608. 1959. — *Liliaceae* tribus *Asparageae.*

Asteraceae *Link*, Handb. 1: 731. 1829 ('*Asteroideae*'). — Nom. alt.; *Compositae*.
T.: *Aster* Linnaeus [*A. amellus* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 181. 1929]
B.H. 2: 163. 1873. — *Compositae*.
E.P. 4 (5): 87. 1889-93 (Hoffmann). — *Compositae*.
Hutch. (1): 481. 1959. *Compositae*.

Austrobaileyaceae *Croizat*, Journ. Cactus and Succ. Soc. America 15: 64. 1943.
T.: *Austrobaileya* C. T. White [*A. scandens* C. T. White]
Hutch. (1): 137. 1959. — *Austrobaileyaceae*.
Austrobaileya was referred to *Magnoliaceae* by C. T. White (Contrib. Arnold Arb. No. 4: 29. 1933). See also Bailey and Swamy in Journ. Arnold Arb. 30: 211 (1949).

Averrhoaceae *J. Hutchinson*, Fam. Fl. Pl. ed. 2. (1): 356. 1959.
T.: *Averrhoa* Linnaeus [*A. bilimbi* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 156. 1929. — I.N.G. 10/02081]
B.H. 1: 277. 1862. — *Geraniaceae* tribus *Oxalideae*, p.p.
E.P. Ed. 2. 19a: 39. 1931 (Knuth). — *Oxalidaceae*, p.p.
Hutch. (1): 356. 1959. — *Averrhoaceae*.

Avicenniaceae *Endlicher*, Ench. Bot. 314. 1841 ('*Avicennieae*').
T.: *Avicennia* Linnaeus [*A. officinalis* Linnaeus]
B.H. 2: 1136. 1876. — *Verbenaceae* tribus *Avicennieae*.
E.P. 4 (3a): 181. 1895 (Briquet). — *Verbenaceae* subfam. *Avicennioideae*.
Hutch. (1): 395. 1959. — *Verbenaceae*, p.p.

Balanitaceae *Endlicher*, Ench. Bot. 547. 1841 ('*Balaniteae*').
T.: *Balanites* Delile, nom. cons. [*B. aegyptiaca* (Linnaeus) Delile; I.C.B.N. 248. 1956]
B.H. 1: 314. 1862. — *Simarubeae* tribus *Picramnieae*, p.p.
E.P. 3 (4): 355. 1896 (Engler). — Ed. 2. 19a: 178. 1931 (Engler†). — *Zygophyllaceae* subfam. *Balanitoideae*.
Hutch. (1): 267. 1959. — *Balanitaceae*.

Balanopaceae *Bentham* in Bentham et J. D. Hooker, Gen. Pl. 3: 341. 1880 ('*Balanopseae*').
T.: *Balanops* Baillon [*B. vieillardii* Baillon; vide Bullock, Kew Bull. 1959: ined.]
B.H. 3: 341. 1880. — *Balanopseae*.
E.P. Nachtr. 114. 1897 (Engler). — *Balanopsidaceae*.
Hutch. (1): 189. 1959. — *Balanopsidaceae*.

Balanophoraceae *L. C. et A. Richard*, Mém. Mus. Hist. Nat. Paris 8: 429. 1822 ('*Balanophoreae*').
T.: *Balanophora* J. R. et G. Forster [*B. fungosa* J. R. et G. Forster]
B.H. 3: 232. 1880. — *Balanophoreae*.
E.P. Ed. 2. 16b: 296. 1935 (Harms). — *Balanophoraceae*.
Hutch. (1): 340. 1959. — *Balanophoraceae* (excl. *Cynomoriaceae*).

Balsaminaceae *A. Richard*, Dict. Class. Hist. Nat. 2: 350. 1810 ('*Balsamineae*').
T.: *Impatiens* Linnaeus (syn. *Balsamina* Gaertner) [*I. noli-tangere* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 184. 1929. — I.N.G. 10/02401]
B.H. 1: 271. 1862. — *Geraniaceae* tribus *Balsamineae*.
E.P. 3 (5): 383. 1895 (O. Warburg et Reiche). — *Balsaminaceae*.
Hutch. (1): 499. 1959. — *Balsaminaceae*.

Barbeuiaceae *Nakai*, Journ. Jap. Bot. 18: 105. 1942.
T.: *Barbeuia* Thouars [*B. madagascariensis* Steudel]
B.H. 3: 85. 1880. — *Phytolaccaceae* tribus *Euphytolacceae*, p.p.
E.P. Ed. 2. 16c: 151. 1934 (Heimerl). — *Phytolaccaceae* tribus *Barbeuieae*.
Hutch. (1): 434. 1959. — *Barbeuiaceae*.

Barbeyaceae *Rendle* in Thiselton Dyer, Fl. Trop. Afr. 6 (2): 14. 1916.
T.: *Barbeya* Schweinfurth [*B. oleoides* Schweinfurth]
E.P. Nachtr. 119. 1897 (Engler). — *Ulmaceae* subfam. *Barbeyoideae*.
Hutch. (1): 203. 1959. — *Barbeyaceae*.

Basellaceae *Moquin-Tandon*, Chenopod. Monogr. Enum. p.x. 1840.
T.: *Basella* Linnaeus [*B. rubra* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 143. 1929]
B.H. 3: 48, 76. 1880. — *Chenopodiaceae* subordo *Baselleae* tribus *Eubaselleae*.
E.P. Ed. 2. 16c: 263. 1934 (Ulbrich). — *Basellaceae*.
Hutch. (1): 443. 1959. — *Basellaceae*.

Batidaceae *Meisner*, Pl. Vasc. Gen. Tab. Diagn. 345. Comm. 260. 1842 ('*Batideae*').
T.: *Batis* P. Browne [*B. maritima* Linnaeus; I.N.G. 11/06906]

B.H. 3: 88. 1880. — *Batideae.*
E.P. 3 (1a): 118. 1893 (Dammer). — *Batidaceae.*
Hutch. (1): 442. 1959. — *Batidaceae.*

Baueraceae *Lindley,* Introd. Nat. Syst. 50. 1830.
T.: *Bauera* H. Andrews [*B. rubioides* H. Andrews]
B.H. 1: 655. 1865. — *Saxifragaceae,* genus anomalum.
E.P. Ed. 2. 18a: 188. 1930 (Engler). — *Saxifragaceae* subfam. *Baueroideae.*
Hutch. (1): 166. 1959. — *Baueraceae.*

Begoniaceae *C. A. Agardh,* Aphor. Bot. 200. 1823.
T.: *Begonia* Linnaeus [*B. obliqua* Linnaeus]
B.H. 1: 841. 1867. — *Begoniaceae.*
E.P. Ed. 2. 21: 548. 1925 (Irmscher). — *Begoniaceae.*
Hutch. (1): 244. 1959. — *Begoniaceae.*

Berberidaceae *A. L. de Jussieu,* Gen. Pl. 286. 1789 (*'Berberides'*).
T.: *Berberis* Linnaeus [*B. vulgaris* Linnaeus; vide Britton et Brown, Ill. Fl. ed. 2. 2: 127. 1913. — Hitchcock, Prop. Brit. Bot. 147. 1929. — I.N.G. 7/06917]
B.H. 1: 40. 1862. — *Berberideae* tribus *Berbereae,* p.p.
E.P. 3 (2): 70. 1888 (Prantl). — *Berberidaceae,* p.p.
Hutch. (1): 412. 1959. — *Berberidaceae.*

Betulaceae *S. F. Gray,* Nat. Arr. Brit. Pl. 2: 243. 1821 (*'Betulideae'*).
T.: *Betula* Linnaeus [*B. alba* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 188. 1929]
B.H. 3: 403. 1880. — *Cupuliferae* tribus *Betuleae.*
E.P. 3 (1): 38. 1887 (Prantl). — *Betulaceae* tribus *Betuleae.*
Hutch. (1): 191. 1959. — *Betulaceae.*

Bignoniaceae *A. L. de Jussieu,* Gen. Pl. 137. 1789 (*'Bignoniae'*).
T.: *Bignonia* Linnaeus [*B. capreolata* Linnaeus; vide Sprague, Journ. Bot. 60: 236, 363. 1922; et *l.c.* 61: 192. 1923. — Rehder, Bibl. Cult. Trees and Shrubs 594. 1950.]
B.H. 2: 1026. 1876. — *Bignoniaceae.*
E.P. 4 (3b): 189. 1894-5 (Schumann). — *Bignoniaceae.*
Hutch. (1): 389. 1959. — *Bignoniaceae.*

Bixaceae *Kunth,* Diss. Malv. etc. 17. 1822 (*'Bixineae'*).
T.: *Bixa* Linnaeus [*B. orellana* Linnaeus]
B.H. 1: 125. 1862. — *Bixineae,* quoad *Bixa* Linnaeus tantum.
E.P. 3 (6): 307. 1895 (O. Warburg). — *Bixaceae* tribus *Bixineae.* — Ed. 2. 21: 313. 1925 (Pilger). — *Bixaceae.*
Hutch. (1): 205. 1959. — *Bixaceae.*

Bombacaceae *Kunth,* Diss. Malv. etc. 5. 1822 (*'Bombaceae'*). — Kunth in Humboldt, Bonpland et Kunth, Nov. Gen. et Sp. 5: 294. 1822 (*'Bombaceae'*).
T.: *Bombax* Linnaeus [*B. ceiba* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 160. 1929]
B.H. 1: 198. 1862. — *Malvaceae* tribus (vel subordo) *Bombaceae.*
E.P. 3 (6): 53. 1890 (Schumann). — *Bombacaceae.*
Hutch. (1): 253. 1959. — *Bombacaceae.*

Bonnetiaceae *Beauvisage,* Contrib. Étud. Anat. Fam. Ternstroem. 256. 1920.
T.: *Bonnetia* Martius et Zuccarini, nom. cons. [*B. anceps* Martius et Zuccarini; vide I.C.B.N. 255. 1956]
B.H. 1: 179. 1862. — *Ternstroemiaceae* tribus *Bonnetieae.*
E.P. Ed. 2. 21: 149. 1925 (Melchior). — *Theaceae* tribus *Bonnetieae.*
Hutch. (1): 271. 1959. — *Bonnetiaceae.*

Boraginaceae *A. L. de Jussieu,* Gen. Pl. 143. 1789 (*'Borragineae'*).
T.: *Borago* Linnaeus [*B. officinalis* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 128. 1929]
B.H. 2: 832. 1876. — *Borragineae,* excl. tribus *Ehretieae.*
E.P. 4 (3a): 71. 1893-5 (Gürke). — *Borraginaceae,* excl. subfam. *Ehretioideae.*
Hutch. (1): 502. 1959. — *Boraginaceae.*

Brassicaceae *Lindley,* Introd. Nat. Syst. ed. 2. 58. 1836. — Nom. alt.; *Cruciferae.*
T.: *Brassica* Linnaeus [*B. oleracea* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 172. 1929]
B.H. 1: 57. 1862. — *Cruciferae.*
E.P. Ed. 2. 17b: 227. 1956 (O. E. Schulz). — *Cruciferae.*
Hutch. (1): 425. 1959. — *Cruciferae.*

Bretschneideraceae *Radlkofer* in Engler et Prantl, Nat. Pflanzenfam. Nachtr. 3: 209. 1907 (in obs.).
T.: *Bretschneidera* W. B. Hemsley [*B. sinensis* W. B. Hemsley]
E.P. Ed. 2. 17b: 699. 1936 (Pax). — *Bretschneideraceae.*

Hutch. (1): 361. 1959. — *Sapindaceae*, p.p. Hemsley (in Hooker, Ic. Pl. 28: *t.* 2708. 1901) referred *Bretschneidera* to the family *Sapindaceae*. See also Heimsch, Lilloa 8: 189 (1942).

Bromeliaceae *A. L. de Jussieu*, Gen. Pl. 49. 1789 ('*Bromeliae*').
T.: *Bromelia* Linnaeus [*B. pinguin* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 144. 1929]
B.H. 3: 657. 1883. — *Bromeliaceae*.
E.P. Ed. 2. 15a: 65. 1930 (Harms). — *Bromeliaceae*.
Hutch. (2): 576. 1959. — *Bromeliaceae*.

Brunelliaceae *Engler* in Engler et Prantl, Nat. Pflanzenfam. Nachtr. 182. 1897.
T.: *Brunellia* Ruiz et Pavon [*B. inermis* Ruiz et Pavon; vide Bullock, Kew Bull. 1959: ined.]
B.H. 1: 313. 1862. — *Simarubeae*, p.p.
E.P. Ed. 2. 18a: 226. 1930 (Engler). — *Brunelliaceae*.
Hutch. (1): 147. 1959. — *Brunelliaceae*.

Bruniaceae *R. Brown* in Abel, Narr. Journ. China 374. 1818. A. P. Decandolle, Prodr. 2: 43. 1825.
T.: *Brunia* Linnaeus [*B. nodiflora* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 134. 1929]
B.H. 1: 670. 1865. — *Bruniaceae*.
E.P. Ed. 2. 18a: 288. 1930 (Niedenzu et Harms). — *Bruniaceae*.
Hutch. (1): 185. 1959. — *Bruniaceae*.

Brunoniaceae *Dumortier*, Anal. Fam. Pl. 19, 21. 1829.
T.: *Brunonia* J. E. Smith [*B. australis* J. E. Smith; vide Bullock, Kew Bull. 1959: ined.]
B.H. 2: 541. 1876. — *Goodenovieae*, p.p.
E.P. 4 (5): 78. 1889 (Schönland). — *Goodeniaceae* subfam. *Brunonioideae*.
Hutch. (1): 479. 1959. — *Brunoniaceae*.

Buddlejaceae *Wilhelm*, Samenpfl. 90. 1910.
T.: *Buddleja* Linnaeus [*B. americana* Linnaeus]
B.H. 2: 787. 1876. — *Loganiaceae* tribus *Eulogancieae* subtribus *Buddleieae*.
E.P. 4 (2): 44. 1892 (Solereder). — *Loganiaceae* subfam. *Buddleioideae*.
Hutch. (1): 373. 1959. — *Buddleiaceae*.

Burmanniaceae *Blume*, Enum. Pl. Javae 27. 1827.
T.: *Burmannia* Linnaeus [*B. disticha* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 144. 1929]
B.H. 3: 455. 1883. — *Burmanniaceae* tribus *Euburmannieae*.
E.P. 2 (6): 44. 1889 (Engler). — *Burmanniaceae* tribus *Euburmannieae*.
Hutch. (2): 685. 1959. — *Burmanniaceae*.
Jonker (A monograph of the *Burmanniaceae*, Utrecht, 1938) included *Thismiaceae*, but not *Corsiaceae*, in this family. See also Airy-Shaw in Kew Bull. 1952: 277-279, *cum fig.* (1952). *Geosiris* Baillon, doubtfully referred to this family by some authors, is the type of the family *Geosiridaceae*.

Burseraceae *Kunth*, Ann. Sc. Nat. 2: 346. 1824.
T.: *Bursera* Linnaeus, nom. cons. [*B. gummifera* Linnaeus; vide I.C.B.N. 249. 1956]
B.H. 1: 321. 1862. — *Burseraceae*.
E.P. Ed. 2. 19a: 405. 1931 (Engler †). — *Burseraceae*.
Hutch. (1): 355. 1959. — *Burseraceae*.

Butomaceae *L. C. Richard*, Mém. Mus. Hist. Nat. Paris 1: 364. 1815 ('*Butomeae*').
T.: *Butomus* Linnaeus [*B. umbellatus* Linnaeus]
B.H. 3: 1004. 1883. — *Alismaceae* tribus *Butomeae*.
E.P. 2 (1): 232. 1889 (Buchenau). — *Butomaceae*.
Hutch. (2): 536. 1959. — *Butomaceae*.

Buxaceae *Loiseleur*, Man. Pl. Us. Indig. 2: 495. 1818.
T.: *Buxus* Linnaeus [*B. sempervirens* Linnaeus]
B.H. 3: 243. 1880. — *Euphorbiaceae* tribus *Buxeae*.
E.P. 3 (5): 130. 1892 (Pax). — *Buxaceae*.
Hutch. (1): 184. 1959. — *Buxaceae*.

Byblidaceae *Domin*, Act. Bot. Bohem. 1: 3. 1922.
T.: *Byblis* Salisbury [*B. liniflora* Salisbury]
B.H. 1: 664. 1865. — *Droseraceae*, p.p.
E.P. 3 (2): 272. 1891 (Drude). — *Droseraceae*, p.p. — Ed. 2. 18a: 286. 1930 (Diels). — *Byblidaceae*.
Hutch. (1): 220. 1959. — *Byblidaceae* (excl. *Roridula*).

Cabombaceae *A. Richard*, Nouv. Élém. Bot. ed. 4. 420. 1828 ('*Cabombeae*').
T.: *Cabomba* Aublet [*C. aquatica* Aublet]
B.H. 1: 45. 1862. — *Nymphaeaceae* tribus *Cabombeae*.
E.P. 3 (2): 5. 1888 (Caspary). — *Nymphaeaceae* subfam. *Cabomboideae*.
Hutch. (1): 406. 1959. — *Cabombaceae*.

Cactaceae *A. L. de Jussieu,* Gen. Pl. 310. 1789 (*'Cacti'*).
T.: *Mammillaria* Haworth, nom. cons. (syn. *Cactus* Linnaeus, nom. rej.) [*M. simplex* Haworth; vide I.C.B.N. 257. 1956]
B.H. 1: 845. 1867. — *Cacteae.*
E.P. Ed. 2. 21: 594. 1925 (Vaupel). — *Cactaceae.*
Hutch. (1): 247. 1959. — *Cactaceae.*

Caesalpiniaceae *R. Brown* in Tuckey, Narr. Exped. Congo 430. 1818 (*'Caesalpineae'*).
T.: *Caesalpinia* Linnaeus [*C. brasiliensis* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 152. 1929]
B.H. 1: 457. 1865. — *Leguminosae* subordo *Caesalpinieae.*
E.P. 3 (3): 125. 1892 (Taubert). — *Leguminosae* subfam. *Caesalpinioideae,* excl. tribus *Kramerieae.*
Hutch. (1): 153. 1959. — *Caesalpiniaceae.*

Callitrichaceae *Link,* Enum. Pl. Berol. 1: 7. 1821 (*'Callitrichinae'*).
T.: *Callitriche* Linnaeus [*C. palustris* Linnaeus]
B.H. 1: 676. 1865. — *Halorageae,* p.p.
E.P. Ed. 2. 19c: 236. 1931 (Pax et K. Hoffmann). — *Callitrichaceae.*
Hutch. (1): 449. 1959. — *Callitrichaceae.*

Calycanthaceae *Lindley,* Bot. Reg. 5: sub *t. 404.* 1819 (*'Calycantheae'*).
T.: *Calycanthus* Linnaeus, nom. cons. [*C. floridus* Linnaeus; vide I.C.B.N. 238. 1956]
B.H. 1: 15. 1862. — *Calycanthaceae.*
E.P. 3 (2): 92. 1888 (Prantl). — *Calycanthaceae.*
Hutch. (1): 151. 1959. — *Calycanthaceae.*

Calyceraceae *R. Brown ex L. C. Richard,* Mém. Mus. Hist. Nat. Paris 6: 74. 1820 (*'Calycereae'*).
T.: *Calycera* Cavanilles [*C. herbacea* Cavanilles]
B.H. 2: 161. 1873. — *Calycereae.*
E.P. 4 (5): 84. 1889 (Höck). — *Calyceraceae.*
Hutch. (1): 475. 1959. — *Calyceraceae.*

Campanulaceae *A. L. de Jussieu,* Gen. Pl. 163. 1789.
T.: *Campanula* Linnaeus [*C. latifolia* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 131. 1929]
B.H. 2: 541, 544. 1876. — *Campanulaceae* tribus *Cyphieae* et tribus *Campanuleae.*
E.P. 4 (5): 40. 1889 (Schönland). — *Campanulaceae* (excl. subfam. *Lobelioideae* et subfam. *Campanuloideae* tribus *Pentaphragmeae* et tribus *Sphenocleae*).
Hutch. (1): 476. 1959. — *Campanulaceae* (excl. *Spehoclea* et *Pentaphragma*).

Canellaceae *Martius,* Nov. Gen. et Sp. 3: 170. 1829.
T.: *Canella* P. Browne, nom. cons. [*C. alba* Murray; vide I.C.B.N. 256. 1956]
B.H. 1: 121. 1862. — *Canellaceae.*
E.P. 3 (6): 314. 1895 (O. Warburg). — *Winteranaceae.* — Ed. 2. 21: 323. 1925 (Gilg). — *Canellaceae.*
Hutch. (1): 128. 1959. — *Canellaceae.*

Cannabiaceae *Endlicher,* Gen. Pl. 286. 1837 (*'Cannabineae'*).
T.: *Cannabis* Linnaeus [*C. sativa* Linnaeus]
B.H. 3: 344. 1880. — *Urticaceae* tribus *Cannabineae.*
E.P. 3 (1): 96. 1888 (Engler). — *Moraceae* subfam. *Cannaboideae.*
Hutch. (1): 201. 1959. — *Cannabiaceae.*

Cannaceae *A. L. de Jussieu,* Gen. Pl. 62. 1789 (*'Cannae'*).
T.: *Canna* Linnaeus [*C. indica* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 114. 1929]
B.H. 3: 639. 1883. — *Scitamineae* tribus *Canneae.*
E.P. Ed. 2. 15a: 640. 1930 (Winkler). — *Cannaceae.*
Hutch. (2): 587. 1959. — *Cannaceae.*
See also Koch in Berliner Gartenzeit. 25: 141 (1857).

Capparidaceae *A. L. de Jussieu,* Gen. Pl. 242. 1789 (*'Capparides'*).
T.: *Capparis* Linnaeus [*C. spinosa* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 160. 1929]
B.H. 1: 103. 1862. — *Cappurideae* (excl. *Tovaria* Ruiz et Pavon).
E.P. Ed. 2. 17b: 146. 1936 (Pax et K. Hoffmann). — *Capparidaceae* (excl. subfam. *Pentadiplandroideae*).
Hutch. (1): 224. 1959. — *Capparidaceae.*

Caprifoliaceae *A. L. de Jussieu,* Gen. Pl. 210. 1789 (*'Caprifolia'*).
T.: *Lonicera* Linnaeus (syn. *Caprifolium* Miller) [*L. caprifolium* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 131. 1929]
B.H. 2: 1. 1873. — *Caprifoliaceae.*
E.P. 4 (4): 156. 1891 (K. Fritsch). — *Caprifoliaceae.*
Hutch. (1): 178. 1959. — *Caprifoliaceae.*

Capusiaceae *Gagnepain,* Bull. Soc. Bot. France 87: 272. 1941.
T.: *Siphonodon* Griffith (syn. *Capusia* Lecomte) [*S. celastrineus* Griffith]

B.H. 1: 370. 1862. — *Celastrineae*, p.p.
E.P. 3 (5): 221. 1892 (Loesener). — *Celastraceae*, p.p.
Hutch. (1): 325. 1959. — *Capusiaceae*.

Cardiopteridaceae *Blume*, Rumphia 3: 205. *t.* 177. 1847 ('*Cardiopterideae*').
T.: *Peripterygium* Hasskarl (syn. *Cardiopteris* Blume, nom. illeg.) [*P. quinquelobatum* Hasskarl; vide Sleumer in Engler et Prantl Nat. Pflanzenfam. ed. 2. 20b: 400. 1942 ('*P. lobatum*'); Bullock, Kew Bull. 1957: 356. 1957]
B.H. 1: 355. 1862. — *Olacineae*, genus anomalum.
E.P. 3 (5): 257. 1893 (Engler). — *Icacinaceae* subfam. *Cardiopterygoideae*. — Ed. 2. 20b: 397. 1942 (Sleumer). — *Peripterygiaceae*.
Hutch. (1): 314. 1959. — *Cardiopteridaceae*.

Caricaceae *Dumortier*, Anal. Fam. Pl. 37, 42. 1829.
T.: *Carica* Linnaeus [*C. papaya* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 192. 1929]
B.H. 1: 809. 1867. — *Passifloreae* tribus *Papayaceae*.
E.P. Ed. 2. 21: 510. 1925 (Harms). — *Caricaceae*.
Hutch. (1): 246. 1959. — *Caricaceae*.

Cartonemataceae *Pichon*, Not. Syst. 12: 219. 1946.
T.: *Cartonema* R. Brown [*C. spicatum* R. Brown]
B.H. 3: 852. 1883. — *Commelinaceae* tribus *Tradescantieae*, p.p.
E.P. Ed. 2. 15a: 171. 1930 (Brückner). — *Commelinaceae* tribus *Tradescantieae*, p.p.
Hutch. (2): 566. 1959. — *Cartonemataceae*.

Caryocaraceae *Szyszylowicz* in Engler et Prantl, Nat. Pflanzenfam. 3 (6): 153. 1893.
T.: *Caryocar* Linnaeus [*C. nuciferum* Linnaeus]
B.H. 1: 178. 1862. — *Ternstroemiaceae* tribus *Rhizoboleae*.
E.P. 3 (6): 153. 1893 (Szyszylowicz). — *Caryocaraceae*. — Ed. 2. 21: 1925 (Pilger). — *Caryocaraceae*.
Hutch. (1): 279. 1959. — *Caryocaraceae*.

Caryophyllaceae *A. L. de Jussieu*, Gen. Pl. 299. 1789 ('*Caryophylleae*').
T.: *Dianthus* Linnaeus (syn. *Caryophyllus* Moench, non Linnaeus) [*D. caryophyllus* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 155. 1929]
B.H. 1: 141. 1862. — *Caryophylleae*.
E.P. Ed. 2. 16c: 275. 1934 (Pax et Hoffmann). — *Caryophyllaceae* (excl. subfam. *Paronychioideae* tribus *Paronychieae* subtribus *Illecebrineae*).
Hutch. (1): 429. 1959. — *Caryophyllaceae*.

Casuarinaceae *R. Brown* in Flinders, Voy. Terra Austr. 2: 571. 1814 ('*Casuarineae*') [*Mirbel*, Ann. Mus. Hist. Nat. Paris 16: 451. 1810 ('*Casuarineae*')].
T.: *Casuarina* Linnaeus ex Adanson [*C. equisetifolia* Linnaeus ex J. R. et G. Forster; vide Bullock, Kew Bull. 1959: ined.]
B.H. 3: 401. 1880. — *Casuarineae*.
E.P. 3 (1): 16. 1887 (Engler). — *Casuarinaceae*.
Hutch. (1): 197. 1959. — *Casuarinaceae*.

Celastraceae *R. Brown* in Flinders, Voy. Terra Austr. 2: 554. 1814 ('*Celastrineae*').
T.: *Celastrus* Linnaeus [*C. scandens* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 134. 1929]
B.H. 1: 357, 358. 1862. — *Celastrineae* tribus *Celastreae*.
E.P. Ed. 2. 20b: 87. 1942 (*Loesener*). — *Celastraceae*, excl. subfam. *Goupioideae*.
Hutch. (1): 320. 1959. — *Celastraceae*.
It is to be noted that some authors unite this family with *Hippocrateaceae*. In these circumstances it is proposed that *Celastraceae* should be conserved over the earlier *Hippocrateaceae*.

Centrolepidaceae *Endlicher*, Gen. Pl. 119. 1836 ('*Centrolepideae*') [*Desvaux*, Ann. Sc. Nat. 13: 41. 1828 ('*Centrolépidées*')].
T.: *Centrolepis* Labillardière [*C. fascicularis* Labillardière]
B.H. 3: 1025. 1883. — *Centrolepideae*.
E.P. Ed. 2. 15a: 27. 1930 (Gilg-Benedict). — *Centrolepidaceae*.
Hutch. (2): 699. 1959. — *Centrolepidaceae*.

Cephalotaceae *Dumortier*, Anal. Fam. Pl. 59, 61. 1829 ('*Cephaloteae*').
T.: *Cephalotus* Labillardière [*C. follicularis* Labillardière]
B.H. 1: 655. 1865. — *Saxifrageae*, genus anomalum.
E.P. Ed. 2. 18a: 71. 1930 (Diels). — *Cephalotaceae*.
Hutch. (1): 458. 1959. — *Cephalotaceae*.

Ceratophyllaceae *S. F. Gray*, Nat. Arr. Brit. Pl. 2: 554. 1821 ('*Ceratophyllae*').
T.: *Ceratophyllum* Linnaeus [*C. demersum* Linnaeus]

B.H. 3: 415. 1880. — *Ceratophylleae.*
E.P. 3 (2): 10. 1888 (Engler). — *Ceratophyllaceae.*
Hutch. (1): 405. 1959. — *Ceratophyllaceae.*

Cercidiphyllaceae *Engler,* Syll. Pflanzenfam. ed. 6. 132. 1909 [*van Tieghem,* Journ. de Bot. 14: 274. 1900 ('*Cercidiphyllacées*')].
T.: *Cercidiphyllum* Siebold et Zuccarini [*C. japonicum* Siebold et Zuccarini]
E.P. 3 (2): 23. 1888 (Prantl). — *Trochodendraceae,* p.p.
Hutch. (1): 132. 1959. — *Cercidiphyllaceae.*
See also Harms in E.P. Nachtr. 3: 110 (1906), under *Trochodendraceae.*

Chailletiaceae *R. Brown* in Tuckey, Narr. Exped. Congo 442. 1818 ('*Chailleteae*').
T.: *Chailletia* A. P. Decandolle [*C. pedunculata* A. P. Decandolle]
B.H. 1: 340. 1862. — *Chailletiaceae.*
E.P. Ed. 2. 19c: 1. 1931 (Engler † et K. Krause). — *Dichapetalaceae.*
Hutch. (1): 150. 1959. — *Chailletiaceae.*
The type species of *Dichapetalum* Thouars is *D. madagascariense* Poiret (Dict. Sc. Nat. 13: 178. 1819).

Chenopodiaceae *Ventenat,* Tabl. Regne Vég. 2: 253. 1799 ('*Chenopodeae*').
T.: *Chenopodium* Linnaeus [*C. album* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 137. 1929]
B.H. 3: 43. 1880. — *Chenopodiaceae* (excl. trib. *Eubaselleae*).
E.P. Ed. 2. 16c: 379. 1934 (Ulbrich). — *Chenopodiaceae.*
Hutch. (1): 438. 1959. — *Chenopodiaceae.*

Chloanthaceae *J. Hutchinson,* Fam. Fl. Pl. ed. 2. (1): 396. *fig. 245.* 1959.
T.: *Chloanthes* R. Brown [*C. stoechadis* R. Brown; vide Bullock, Kew Bull. 1959: ined.]
B.H. 2: 1132. 1876. — *Verbenaceae* tribus *Chloantheae.*
E.P. 4 (3a): 160. 1895 (Briquet). — *Verbenaceae* subfam. *Chloanthoideae.*
Hutch. (1): 396. 1959. — *Chloanthaceae.*

Chloranthaceae *R. Brown ex Sims,* Bot. Mag. 48: sub *t. 2190.* 1820 ('*Chlorantheae*').
T.: *Chloranthus* Swartz [*C. inconspicuus* Swartz]
B.H. 3: 133. 1880. — *Chloranthaceae.*
E.P. 3 (1): 12. 1887 (Engler). — *Chloranthaceae.*
Hutch. (1): 421. 1959. — *Chloranthaceae.*

Chrysobalanaceae *R. Brown* in Tuckey, Narr. Exped. Congo 433. 1818 ('*Chrysobalaneae*').
T.: *Chrysobalanus* Linnaeus [*C. icaco* Linnaeus]
B.H. 1: 602. 1865. — *Rosaceae* tribus *Chrysobalaneae.*
E.P. 3 (3): 12, 55. 1888 (Focke). — *Rosaceae* subfam. *Chrysobalanoideae.*
Hutch. (1): 149. 1959. — *Rosaceae,* p.p.

Circaeasteraceae *J. Hutchinson,* Fam. Fl. Pl. 1: 98. *fig. 20.* 1926.
T.: *Circaeaster* Maximowicsz [*C. agrestis* Maximowicsz]
B.H. 3: 1220. 1883. — *Chloranthaceae* (addit.).
E.P. Nachtr. 332. 1897 (Harms). — Genus anomalum.
Hutch. (1): 412. 1959. — *Circaeasteraceae.*
Maximowicsz referred *Circaeaster* to the family *Chloranthaceae.*

Cistaceae *A. L. de Jussieu,* Gen. Pl. 294. 1789 ('*Cisti*').
T.: *Cistus* Linnaeus [*C. crispus* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 162. 1929]
B.H. 1: 112. 1862. — *Cistineae.*
E.P. Ed. 2. 21: 289. 1925 (Janchen). — *Cistaceae.*
Hutch. (1): 206. 1959. — *Cistaceae.*

Clethraceae *Klotzsch,* Linnaea 24: 12. 1851.
T.: *Clethra* Linnaeus [*C. alnifolia* Linnaeus]
B.H. 2: 603. 1876. — *Ericaceae,* genus anomalum.
E.P. 4 (1): 1. 1889 (Drude). — *Clethraceae.*
Hutch. (1): 288. 1959. — *Clethraceae.*

Clusiaceae *Lindley,* Introd. Nat. Syst. ed. 2. 74. 1836. — Nom. alt.; *Guttiferae.*
T.: *Clusia* Linnaeus [*C. major* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 160. 1929]
B.H. 1: 167. 1862. — *Guttiferae,* excl. trib. *Quineae.*
E.P. Ed. 2. 21: 154. 1925 (Engler). — *Guttiferae,* excl. subfam. *Hypericoideae.*
Hutch. (1): 298. 1959. — *Clusiaceae.*
See notes under *Guttiferae* and *Hypericaceae.* In case of union of these two families it is proposed that *Clusiaceae* should be conserved over *Hypericaceae.*

Cneoraceae *Link,* Handb. 2: 440. 1831 ('*Cneoreae*').
T.: *Cneorum* Linnaeus [*C. tricoccon* Linnaeus]
B.H. 1: 311. 1862. — *Simarubeae,* p.p.

E.P. Ed. 2. 19a: 184. 1931 (Engler †). — *Cneoraceae.*
Hutch. (1): 314. 1959. — *Cneoraceae.*
See also van Tieghem, Ann. Sc. Nat. Sér. 8. 9: 363 (1899).

Cobaeaceae *D. Don,* Edinburgh Phil. Journ. 10: 109. 1824 (*'Cobeaceae'*).
T.: *Cobaea* Cavanilles, nom. cons. prop. (syn. tax. *Rosenbergia* Oersted; typus *R. gracilis* Oersted) [*C. scandens* Cavanilles; vide Wilson et Bullock, Taxon 6: 235. 1957]
B.H. 2: 824. 1876. — *Polemoniaceae,* p.p.
E.P. 4 (3a): 44. 1891 (A. Peter). — *Polemoniaceae* tribus *Cobaeeae.*
Hutch. (1): 387. 1959. — *Cobaeaceae.*

Cochlospermaceae *Planchon* in W. J. Hooker, London Journ. Bot. 6: 305. 1847.
T.: *Cochlospermum* Kunth, nom. cons. [*C. gossypium* (Linnaeus) A. P. Decandolle; vide I.C.B.N. 256. 1956]
B.H. 1: 122. 1862. — *Bixineae* tribus *Bixeae,* quoad *Cochlospermum* Kunth et *Amoreuxia* A. P. Decandolle
E.P. 3 (6): 310, 312. 1895 (O. Warburg). — *Bixaceae* tribus *Maximilianeae.* — Ed. 2. 21: 316. 1925 (Pilger). — *Cochlospermaceae* tribus *Cochlospermeae.*
Hutch. (1): 208. 1959. — *Cochlospermaceae.*

Columelliaceae *D. Don,* Edinburgh New Phil. Journ. 6: 46. 1829 (*'Columellieae'*).
T.: *Columellia* Ruiz et Pavon [*C. oblonga* Ruiz et Pavon; vide Bullock, Kew Bull. 1959: ined.]
B.H. 2: 989. 1876. — *Columelliaceae.*
E.P. 4 (3b): 186. 1894 (K. Fritsch). — *Columelliaceae.*
Hutch. (1): 493. 1959. — *Columelliaceae.*
Columellia Ruiz et Pavon is a later homonym of the rejected name *Columella* Loureiro (1790), and requires to be conserved.

Combretaceae *R. Brown,* Prodr. 1: 351. 1810.
T.: *Combretum* Loefling, nom. cons. [*C. fruticosum* (Loefling) Stuntz; vide I.C.B.N. 258. 1956]
B.H. 1: 683. 1865. — *Combretaceae.*
E.P. 3 (7): 106. 1893 (Brandis). — *Combretaceae.*
Hutch. (1): 307. 1959. — *Combretaceae.*

Commelinaceae *R. Brown,* Prodr. 1: 268. 1810 (*'Commelineae'*).
T.: *Commelina* Linnaeus [*C. communis* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 118. 1929]
B.H. 3: 844. 1883. — *Commelinaceae* (excl. *Cartonema* R. Brown).
E.P. Ed. 2. 15a: 159. 1930 (Brückner). — *Commelinaceae* (excl. *Cartonema* R. Brown).
Hutch. (2): 561. 1959. — *Commelinaceae.*
See also Woodson, Ann. Missouri Bot. Gard. 29: 141 (1942) and Pichon, Not. Syst. 12: 217 (1946). The genus *Cartonema* is the type of the family name *Cartonemataceae.*

Compositae *J. Gaertner,* Fruct. 2: 353. 1791 (*'Compositiflorae'*). — Nom. alt.; *Asteraceae.*
T.: *Aster* Linnaeus [*A. amellus* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 181. 1929]
B.H. 2: 163. 1873. — *Compositae.*
E.P. 4 (5): 87. 1889-93 (O. Hoffmann). — *Compositae.*
Hutch. (1): 481. 1959. — *Compositae.*

Connaraceae *R. Brown* in Tuckey, Narr. Exped. Congo 431. 1818.
T.: *Connarus* Linnaeus [*C. monocarpus* Linnaeus]
B.H. 1: 430. 1862. — *Connaraceae.*
E.P. 3 (3): 61. 1888-91 (Gilg). — *Connaraceae.*
Hutch. (1): 145. 1959. — *Connaraceae.*
See also E.P. Nachtr. 4: 117. 1914 (Pilger et K. Krause).

Convolvulaceae *A. L. de Jussieu,* Gen. Pl. 132. 1789 (*'Convolvuli'*).
T.: *Convolvulus* Linnaeus [*C. arvensis* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 130. 1929]
B.H. 2: 865. 1876. — *Convolvulaceae,* excl. tribus *Cuscuteae,* tribus *Nolaneae* et tribus *Dichondreae.*
E.P. 4 (3a): 1. 1891 (A. Peter). — *Convolvulaceae,* excl. subfam. *Cuscutoideae* et tribus *Dichondreae.*
Hutch. (1): 484. 1959. — *Convolvulaceae* (excl. *Dichondra*).

Coriariaceae *A. P. Decandolle,* Prodr. 1: 739. 1824 (*'Coriarieae'*).
T.: *Coriaria* Linnaeus [*C. myrtifolia* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 192. 1929]
B.H. 1: 429. 1862. — *Coriarieae.*
E.P. 3 (5): 128. 1891-2 (Engler). — *Coriariaceae.*
Hutch. (1): 147. 1959. — *Coriariaceae.*

Cornaceae *Dumortier,* Anal. Fam. Pl. 33, 34. 1829 (*'Corneae'*).

T.: *Cornus* Linnaeus [*C. mas* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 125. 1929]
B.H. 1: 947. 1867. — *Cornaceae,* p.p.
E.P. 3 (8): 250. 1898 (Harms). — *Cornaceae,* p.p.
Hutch. (1): 171. 1959. — *Cornaceae.*
Engler (Syll. Pflanzenfam. ed. 6. — 1909) excluded *Nyssaceae* and *Alangiaceae* from the family and all three families were monographed by Wangerin in Engler Pflanzenr. in 1910. See also *Davidiaceae.*

Corsiaceae *Beccari,* Malesia 1: 238. *t.* 9. 1878.
T.: *Corsia* Beccari [*C. ornata* Beccari]
B.H. 3: 456. 1883. — *Burmanniaceae* tribus *Corsieae.*
E.P. 2 (6): 50. 1889 (Engler). — *Burmanniaceae* tribus *Corsieae.*
Hutch. (2): 689. 1959. — *Corsiaceae.*
Jonker (A monograph of the *Burmanniaceae,* Utrecht, 1938) also regarded *Corsiaceae* as a distinct family (*l.c.* 9).

Corylaceae *Mirbel,* Élém. Phys. Vég. Bot. 2: 906. 1815.
T.: *Corylus* Linnaeus [*C. avellana* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 189. 1929]
B.H. 3: 403. 1880. — *Cupuliferae* tribus *Coryleae.*
E.P. 3 (1): 41. 1887 (Prantl). — *Betulaceae* tribus *Coryleae.*
Hutch. (1): 193. 1959. — *Corylaceae.*

Corynocarpaceae *Engler* in Engler et Prantl, Nat. Pflanzenfam. Nachtr. 215. 1897.
T.: *Corynocarpus* J. R. et G. Forster [*C. laevigatus* J. R. et G. Forster]
B.H. 1: 425. 1862. — *Anacardiaceae* tribus *Anacardieae,* p.p.
E.P. Nachtr. 215. 1897 (Engler). — *Corynocarpaceae.* — Ed. 2. 20b: 22. 1942 (J. Krause). — *Corynocarpaceae.*
Hutch. (1): 321. 1959. — *Corynocarpaceae.*
See also W. B. Hemsley, Ann. Bot. 17: 743-760. *t.* 36 (1903), and 18: 179-180 (1904). Also van Tieghem, Journ. de Bot. 14: 189-197 (1900).

Crassulaceae *A. P. Decandolle,* Bull. Soc. Philom. no. 49: 1. 1801.
T.: *Crassula* Linnaeus [*C. perfoliata* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 143. 1929]
B.H. 1: 656. 1865. — *Crassulaceae.*
E.P. Ed. 2. 18a: 352. 1930 (Berger). — *Crassulaceae.*
Hutch. (1): 457. 1959. — *Crassulaceae.*

Crossosomataceae *Engler* in Engler et Prantl, Nat. Pflanzenfam. Nachtr. 185. 1897.
T.: *Crossosoma* Nuttall [*C. californicum* Nuttall]
B.H. 1: 15. 1862. — *Dilleniaceae,* genus anomalum.
E.P. Nachtr. 185. 1897 (Engler). — *Crossosomataceae.*
Hutch. (1): 145. 1959. — *Crossosomataceae.*

Cruciferae *A. L. de Jussieu,* Gen. Pl. 237. 1789. — Nom. alt.; *Brassicaceae.*
T.: *Brassica* Linnaeus [*B. oleraceus* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 172. 1929]
B.H. 1: 57. 1862. — *Cruciferae.*
E.P. Ed. 2. 17b: 227. 1936 (O. E. Schulz). — *Cruciferae.*
Hutch. (1): 425. 1959. — *Cruciferae.*

Crypteroniaceae *A. Decandolle,* Prodr. 16 (2): 677. 1868.
T.: *Crypteronia* Blume [*C. paniculata* Blume]
B.H. 1: 782. 1867. — *Lythrarieae* tribus *Lythreae,* p.p.
E.P. 3 (7): 21. 1892 (Niedenzu). — *Blattiaceae* subfam. *Crypteronioideae.*
Hutch. (1): 167. 1959. — *Crypteroniaceae.*
Blattiaceae is the name adopted by Niedenzu for the *Sonneratiaceae* of this list.

Ctenolophonaceae *Exell et Mendonça,* Consp. Fl. Angol. 1: 248, 392. 1951.
T.: *Ctenolophon* Oliver [*C. parvifolius* Oliver; vide Bullock, Kew Bull. 1959: ined.]
E.P. Ed. 2. 19a: 122. 1931 (Winkler). — *Linaceae* subfam. *Ctenolophonoideae.*
Hutch. (1): 265. 1959. — *Ctenolophonaceae.*
Oliver (Trans. Linn. Soc. London 18: 516. 1873) doubtfully referred *Ctenolophon* to *Olacaceae* ('*Olacineae*') as a *genus anomalum.*

Cucurbitaceae *A. L. de Jussieu,* Gen. Pl. 393. 1789.
T.: *Cucurbita* Linnaeus [*C. pepo* Linnaeus; vide M. L. Green, Prop. Brit. 190. 1929]
B.H. 1: 816. 1867. — *Cucurbitaceae.*
E.P. 4 (5): 1. 1889 (E. G. O. Müller et Pax). — *Cucurbitaceae.*
Hutch. (1): 242. 1959. — *Cucurbitaceae.*

Cunoniaceae *R. Brown* in Flinders, Voy. Terra Austr. 2: 548. 1814.
T.: *Cunonia* Linnaeus [*C. capensis* Linnaeus]
B.H. 1: 632. 1865. — *Saxifrageae* tribus *Cunonieae.*
E.P. Ed. 2. 18a: 229. 1930 (Engler). — *Cunoniaceae.*

Hutch. (1): 158. 1959. — *Cunoniaceae.*

Cunonia Linnaeus (1759) is a later homonym of *Cunonia* P. Miller (1756) and requires to be conserved.

Cuscutaceae *Dumortier,* Anal. Fam. Pl. 20, 25. 1829.
T.: *Cuscuta* Linnaeus [*C. europaea* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 126. 1929]
B.H. 2: 868, 881. 1876. — *Convolvulaceae* tribus *Cuscuteae.*
E.P. 4 (3a): 37. 1891 (A. Peter). — *Convolvulaceae* subfam. *Cuscutoideae.*
Hutch. (1): 501. 1959. — *Cuscutaceae.*

Cyclanthaceae *Poiteau,* Mém. Mus. Hist. Nat. Paris 9: 35. 1822 ('*Cyclantheae*').
T.: *Cyclanthus* Poiteau [*C. bipartitus* Poiteau; vide Harling, Acta Horti Berg. 18(1): 399. 1958]
B.H. 3: 951. 1883. — *Cyclanthaceae.*
E.P. 2 (3): 93. 1889 (Drude). — *Cyclanthaceae.*
Hutch. (2): 672. 1959. — *Cyclanthaceae.*

Harling's magnificent "Monograph of the Cyclanthaceae", published as volume 18 (1) of Acta Horti Bergiani (1958) will remain a standard work for many years. *Cyclanthus* is there treated as a monotypic genus of wide distribution.

Cynomoriaceae *Lindley,* Nixus Pl. 23. 1833 ('*Cynomorieae*').
T.: *Cynomorium* Linnaeus [*C. coccineum* Linnaeus]
B.H. 3: 233, 234. 1880. — *Balanophoreae* tribus *Cynomorieae.*
E.P. 3 (1): 250. 1889 (Engler). — *Balanophoraceae* subfam. *Cynomorioideae.* — Nachtr. 268. 1897 (Engler). — *Cynomoriaceae.*
Hutch. (1): 340. 1959. — *Balanophoraceae,* p.p.

There has been considerable argument as to the affinities of *Cynomorium.* Engler (1897) removed it from *Balanophoraceae* and gave it family rank at the end of "Reihe" *Myrtiflorae.* Harms (E.P. Ed. 2. 16b: 309. 1935, in obs.) concurred.

Cyperaceae *A. L. de Jussieu,* Gen. Pl. 26. 1789 ('*Cyperoideae*').
T.: *Cyperus* Linnaeus [*C. esculentus* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 118. 1929]
B.H. 3: 1037. 1883. — *Cyperaceae.*
E.P. 2 (2): 98. 1887 (Pax). — *Cyperaceae.*
Hutch. (2): 704. 1959. — *Cyperaceae.*

Cypripediaceae *Lindley,* Nixus Pl. 22. 1833 ('*Cypripedieae*').
T.: *Cypripedium* Linnaeus [*C. calceolus* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 186. 1929]
B.H. 3: 464. 1883. — *Orchideae* tribus *Cypripedieae,* p.p.
E.P. 2 (6): 82. 1889 (Pfitzer). — *Orchidaceae* subtribus *Cypripedieae.*
Hutch. (2): 691. 1959. — *Orchidaceae* tribus *Cypripedieae.*

Some modern authors consider that if *Apostasiaceae* is treated as a family distinct from *Orchidaceae,* then *Cypripediaceae* must also be regarded as distinct.

Cytinaceae *Brongniart,* Ann. Sc. Nat. 1: 39. 1824 ('*Cytineae*').
T.: *Cytinus* Linnaeus, nom. cons. [*C. hypocistis* (Linnaeus) Linnaeus; vide I.C.B.N. 235. 1956]
B.H. 3: 116. 1880. — *Cytinaceae* tribus *Rafflesieae.*
E.P. Ed. 2. 16b: 243. 1935 (Harms). — *Rafflesiaceae.*
Hutch. (1): 416. 1959. — *Cytinaceae.*

Daphniphyllaceae *Mueller Argau* in Decandolle, Prodr. 16 (1): 1869.
T.: *Daphniphyllum* Blume [*D. glaucescens* Blume; I.N.G. 10/02217]
B.H. 3: 282. 1880. — *Euphorbiaceae* tribus *Phyllantheae,* p.p.
E.P. 3 (5): 36. 1890 (Pax). — *Euphorbiaceae* tribus *Daphniphylleae.* — Ed. 2. 19c: 233. 1931 (Rosenthal). — *Daphniphyllaceae.*
Hutch. (1): 184. 1959. — *Daphniphyllaceae.*

Hallier (Bot. Mag. Tokyo 18: 55. 1904) regarded this family as a tribe of *Hamamelidaceae.*

Datiscaceae *R. Brown* in Denham et Clapperton, Trav. N. and Central Afr. 230. 1826 ('*Datisceae*').
T.: *Datisca* Linnaeus [*D. cannabina* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 192. 1929]
B.H. 1: 844. 1867. — *Datisceae.*
E.P. Ed. 2. 21: 543. 1925 (Gilg). — *Datiscaceae.*
Hutch. (1): 245. 1959. — *Datiscaceae.*

Davidiaceae *Takhtadzhyan,* Proiskh. Pokruitosem. Rast. 89. 1954.
T.: *Davidia* Baillon [*D. involucrata* Baillon]
E.P. 3 (8): 255. 1898 (Harms). — *Cornaceae* subfam. *Davidioideae.*
Hutch. (1): 175. 1959. — *Nyssaceae,* p.p.

Davidiaceae was regarded as a subfamily (*Davidioideae*) by Wangerin (in Engler, Pflanzenreich, *Nyssaceae* 17. 1910). Li (Lloydia 17: 330. 1955) independently proposed family rank and gave a review of the relevant literature. Baillon (Adansonia 10: 112. 1871) thought that *Davidia* approached *Cornaceae* and *Hamamelidaceae*, but did not refer it definitely to either.

Degeneriaceae *I. W. Bailey et A. C. Smith*, Journ. Arnold Arb. 23: 357. *tt. 1-5.* 1942.
T.: *Degeneria* I. W. Bailey et A. C. Smith [*D. vitiensis* I. W. Bailey et A. C. Smith]
Hutch. (1): 128. 1959. — *Winteraceae*, p.p.

Dialypetalanthaceae *Rizzini et Occhioni*, Lilloa 17: 253. *tt. 1-17.* 1949.
T.: *Dialypetalanthus* Kuhlmann [*D. fusces-cens* Kuhlmann]
Hutch. (1): 384. 1959. — *Dialypetalantha-ceae.*
Kuhlmann (Arch. Jard. Bot. Rio de Janeiro 4: 363. 1925) referred *Dialypetalanthus* to the family *Rubiaceae*. See also the same author in Rodriguesia No. 15: 25 (1942).

Diapensiaceae *Lindley*, Introd. Nat. Syst. ed. 2. 233. 1836.
T.: *Diapensia* Linnaeus [*D. lapponica* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 128. 1929]
B.H. 2: 618. 1876. — *Diapensiaceae* tribus *Diapensieae.*
E.P. 4 (1): 80. 1889 (Drude). — *Diapensia-ceae* tribus *Diapensieae.*
Hutch. (1): 293. 1959. — *Diapensiaceae* (excl. *Galax*).
See also *Galacaceae.*

Dichondraceae *Dumortier*, Anal. Fam. Pl. 20, 24. 1829.
T.: *Dichondra* J. R. et G. Forster [*D. repens* J. R. et G. Forster]
B.H. 2: 867. 1876. — *Convolvulaceae* tribus *Dichondreae.*
E.P. 4 (3a): 13. 1891 (A. Peter). — *Convol-vulaceae* tribus *Dichondreae.*
Hutch. (1): 485. 1959. — *Convolvulaceae*, p.p.

Diclidantheraceae *J. G. Agardh*, Theoria Syst. Pl. Fam. Phan. 227. 1858 ('*Diclidan-thereae*').
T.: *Diclidanthera* Martius [*D. laurifolia* Martius *]

* Lectotype, selected here since the fruit of the second species, *D. pendulifolia* Martius, was at the time unknown and the '*character differentialis*' depended to some extent upon the fruit.

B.H. 2: 671. 1876. — Genus *Styracacearum.*
E.P. 4 (1): 180. 1890 (Gürke). — Genus *Styracacearum.*
Hutch. (1): 232. 1959. — *Polygalaceae*, p.p.
Martius (Nov. Gen. et Sp. 2: 139. *tt. 196-7.* 1827) referred *Diclidanthera* to *Ebenaceae.*

Didiereaceae *Radlkofer* in Engler et Prantl, Nat. Pflanzenfam. 3 (5): 462. 1896 ('*Didie-reae*').
T.: *Didierea* Baillon [*D. madagascariensis* Baillon]
E.P. 3 (5): 462. 1896 (Radlkofer). — *Didie-reae.*
Hutch. (1): 369. 1959. — *Didiereaceae.*
See also Pilger in E.P. Nachtr. 3. 209 (1907).

Dilleniaceae *Salisbury*, Parad. Lond. 2 (1): sub *t.* 73. 1807 ('*Dilleneae*').
T.: *Dillenia* Linnaeus [*D. indica* Linnaeus]
B.H. 1: 10. 1862. — *Dilleniaceae.*
E.P. Ed. 2. 21: 7. 1925 (Gilg et Werdermann). — *Dilleniaceae.*
Hutch. (1): 143. 1959. — *Dilleniaceae.*

Dionaeceae *Small*, Fl. Southeast. U.S. 492. 1903.
T.: *Dionaea* Ellis [*D. muscipula* Ellis]
B.H. 1: 663. 1865. — *Droseraceae*, p.p.
E.P. 3 (2): 268. 1891 (Drude). — *Drosera-ceae*, p.p.
Hutch. (1): 467. 1959. — *Droseraceae*, p.p.

Dioncophyllaceae *Airy Shaw*, Kew Bull. 1951: 333, *cum fig.* 1952.
T.: *Dioncophyllum* Baillon [*D. thollonii* Baillon]
E.P. 3 (6a): 28. 1893 (O. Warburg). — *Fla-courtiaceae* tribus *Scolopieae* subtribus *Euscolopieae*, p.p. — Ed. 2. 21: 390, 420. 1925 (auct. Gilg). — *Flacourtiaceae* tribus *Scolopieae* subtribus *Dioncophyllinae.*
Hutch. (1): 207. 1959. — *Flaucourtiaceae*, p.p.
See also Sprague in Kew Bull. 1916. 89 (1916).

Dioscoreaceae *R. Brown*, Prodr. 294. 1810 ('*Dioscoreae*').
T.: *Dioscorea* Linnaeus [*D. bulbifera* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 192. 1929]
B.H. 3: 741. 1883. — *Dioscoreaceae*, p.p.
E.P. Ed. 2. 15a: 438. 1930 (Knuth). — *Dios-coreaceae* tribus *Dioscoreae.*
Hutch. (2): 658. 1959. — *Dioscoreaceae.*

Dipentodontaceae *Merrill*, Brittonia 4: 73. *fig. 2.* 1941. ('*Dipentodonaceae*').
T.: *Dipentodon* Dunn [*D. sinicus* Dunn]

Hutch. (1): 333. 1959. — *Dipentodontaceae.*
Dunn (Kew Bull. 1911: 310. 1911) referred *Dipentodon* to the family *Celastraceae,* where it was left by Pilger and K. Krause in E.P. Nachtr. 4. 187 (1914).

Dipsacaceae *A. L. de Jussieu,* Gen. Pl. 194. 1789 ('*Dipsaceae*').
T.: *Dipsacus* Linnaeus [*D. fullonum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 123. 1929]
B.H. 2: 157. 1873. — *Dipsaceae.*
E.P. 4 (4): 182. 1891 (Höck). — *Dipsacaceae.*
Hutch. (1): 474. 1959. — *Dipsacaceae.*

Dipterocarpaceae *Blume,* Bijdr. 1: 222. 1825 ('*Dipterocarpeae*').
T.: *Dipterocarpus* C. F. Gaertner [*D. costatus* C. F. Gaertner; vide Bullock, Kew Bull. 1959: ined.]
B.H. 1: 189. 1862. — *Dipterocarpeae.*
E.P. Ed. 2. 21: 237. 1925 (Gilg). — *Dipterocarpaceae.*
Hutch. (1): 285. 1959. — *Dipterocarpaceae.*

Dirachmaceae *J. Hutchinson,* Fam. Fl. Pl. ed. 2. (1): 248. *fig. 114.* 1959.
T.: *Dirachma* Schweinfurth ex I. B. Balfour [*D. socotrana* Schweinfurth ex I. B. Balfour]
E.P. Ed. 2. 19a: 66. 1931 (Knuth). — *Geraniaceae* tribus *Dirachmeae.*
Hutch. (1): 248. *fig. 114.* 1959. — *Dirachmaceae.*
Balfour (Proc. Roy. Soc. Edinburgh 12: 493. 1884) referred *Dirachma* to the family *Geraniaceae.*

Donatiaceae *Skottsberg,* Plant World 18: 137. 1915.
T.: *Donatia* J. R. et G. Forster, nom. cons. [*D. fascicularis* J. R. et G. Forster; vide I.C.B.N. 241. 1956]
B.H. 1: 634. 1865. — *Saxifrageae* tribus *Saxifrageae,* p.p.
E.P. 3 (2a): 67. 1890 (Engler). — *Saxifragaceae* subfam. *Saxifragoideae* tribus *Donatieae.*
Hutch. (1): 462. 1959. — *Donatiaceae.*
The tribe *Donatieae* (*Saxifragaceae*) was raised to the rank of subfamily and transferred to *Stylidiaceae* by Mildbraed (Engler, Pflanzenr.) in 1908. See also E.P. Nachtr. 4. 314 (1915, Pilger et K. Krause). Also B. Chandler in Notes Royal Bot. Gard. Edinburgh 5: 43 (1911).

Droseraceae *Salisbury,* Parad. Lond. sub *t. 95.* 1808 ('*Drosereae*').
T.: *Drosera* Linnaeus [*D. rotundifolia* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 143. 1929]
B.H. 1: 661. 1865. — *Droseraceae,* p.p.
E.P. 3 (2): 261. 1891 (Drude). — *Droseraceae,* p.p. — Ed. 2. 17b: 766. 1936 (Diels). — *Droseraceae,* p.p.
Hutch. (1): 467. 1959. — *Droseraceae,* p.p.
See also *Dionaeaceae,* which has most often been referred to *Droseraceae.*

Duckeodendraceae *Kuhlmann,* Arq.-Serv. Florest. Rio de Janeiro 3: 1, 7. 1950.
T.: *Duckeodendron* Kuhlmann [*D. cestroides* Kuhlmann]
Hutch (1): 393. 1959. — *Ehretiaceae,* p.p.
The genus *Duckeodendron* was originally referred to the *Solanaceae.*

Dysphaniaceae *Pax* in Engler, Bot. Jahrb. 61: 230. 1927, in obs.
T.: *Dysphania* R. Brown [*D. littoralis* R. Brown]
B.H. 3: 14. 1880. — *Illecebraceae,* p.p.
E.P. Ed. 2. 16c: 272. 1934 (Pax et K. Hoffmann). — *Dysphaniaceae.*
Hutch. (1): 438. 1959. — *Chenopodiaceae,* p.p.

Ebenaceae *Ventenat,* Tabl. Regne Vég. 2: 443. 1799.
T.: *Diospyros* Linnaeus (syn. *Ebenus* Burmann ex Kuntze, non Linnaeus; *Maba* J. R. et G. Forster) [*D. lotus* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 194. 1929]
B.H. 2: 662. 1876. — *Ebenaceae.*
E.P. 4 (1): 153. 1891 (Gürke). — *Ebenaceae.*
Hutch. (1): 348. 1959. — *Ebenaceae.*

Ehretiaceae *Martius,* Nov. Gen. et Sp. 2: 138. 1827.
T.: *Ehretia* Linnaeus [*E. tinifolia* Linnaeus]
B.H. 2: 834. 1876. — *Borragineae* tribus *Ehretieae.*
E.P. 4 (3a): 86. 1893 (Gürke). — *Borraginaceae* subfam. *Ehretioideae.*
Hutch. (1): 393. 1959. — *Ehretiaceae* (excl. *Duckeodendraceae*).

Elaeagnaceae *A. L. de Jussieu,* Gen. Pl. 74. 1789 ('*Elaeagni*').
T.: *Elaeagnus* Linnaeus [*E. angustifolia* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 126. 1929]
B.H. 3: 203. 1880. — *Elaeagnaceae.*
E.P. 3 (6a): 246. 1894 (Gilg). — *Elaeagnaceae.*
Hutch. (1): 342. 1959. — *Elaeagnaceae.*

Elaeocarpaceae *A. P. Decandolle,* Prodr. 1: 519. 1824 ('*Elaeocarpeae*').

T.: *Elaeocarpus* Linnaeus [*E. serratus* Linnaeus]
B.H. 1: 231, 239. 1862. — *Tiliaceae* tribus *Elaeocarpeae*.
E.P. 3 (6): 1. 1890 (Schumann). — *Elaeocarpaceae*.
Hutch. (1): 250. 1959. — *Tiliaceae*, p.p.

Elatinaceae *Cambessèdes*, Mém. Mus. Hist. Nat. Paris 18: 225. 1829 ('*Elatineae*').
T.: *Elatine* Linnaeus [*E. hydropiper* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 151. 1929]
B.H. 1: 162. 1862. — *Elatineae*.
E.P. Ed. 2. 21: 270. 1925 (Niedenzu). — *Elatinaceae*.
Hutch. (1): 427. 1959. — *Elatinaceae*.

Empetraceae *S. F. Gray*, Nat. Arr. Brit. Pl. 2: 732. 1821 ('*Empetrideae*').
T.: *Empetrum* Linnaeus [*E. nigrum* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 191. 1929]
B.H. 3: 413. 1880. — *Empetraceae*.
E.P. 3 (5): 123. 1891 (Pax). — *Empetraceae*.
Hutch. (1): 317. 1959. — *Empetraceae*.

Epacridaceae *R. Brown*, Prodr. 535. 1810 ('*Epacrideae*').
T.: *Epacris* Cavanilles, nom. cons. [*E. longiflora* Cavanilles; — I.C.B.N. 262. 1956]
B.H. 2: 608. 1876. — *Epacrideae*.
E.P. 4 (1): 66. 1889 (Drude). — *Epacridaceae*.
Hutch. (1): 292. 1959. — *Epacridaceae*.

Eremosynaceae *Takhtadzhyan*, Proisk. Pokruitosem. Rast. 86. 1954.
T.: *Eremosyne* Endlicher [*E. pectinata* Endlicher]
B.H. 1: 635. 1865. — *Saxifrageae* tribus *Saxifrageae*, p.p.
E.P. 3 (2): 65. 1890 (auct. Engler). — *Saxifragaceae* subfam. *Saxifragoideae* tribus *Eremosyneae*. — Ed. 2. 18a: 225. 1930 (Engler). — *Saxifragaceae*, genus anomalum.
Hutch. (1): 460. 1959 (Dandy). — *Eremosynaceae*.

Ericaceae *A. L. de Jussieu*, Gen. Pl. 159. 1789 ('*Ericae*').
T.: *Erica* Linnaeus [*E. tetralix* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 150. 1929]
B.H. 2: 577. 1876. — *Ericaceae*, excl. tribus *Pyroleae* et genus anomalum.
E.P. 4 (1): 15. 1889 (Drude). — *Ericaceae*, excl. subfam. *Vaccinioideae*.
Hutch. (1): 290. 1959. — *Ericaceae*.

Eriocaulaceae *Desvaux*, Ann. Sc. Nat. 13: 45. 1828 ('*Eriocauloneae*').
T.: *Eriocaulon* Linnaeus [*E. decangulare* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 122. 1929]
B.H. 3: 1019. 1883. — *Eriocauleae*.
E.P. Ed. 2. 15a: 39. 1930 (Ruhland). — *Eriocaulaceae*.
Hutch. (2): 574. 1959. — *Eriocaulaceae*.

Erythropalaceae *Gagnepain ex Pilger et K. Krause* in Engler et Prantl, Nat. Pflanzenfam. Nachtr. 4: 74. 1914 [*van Tieghem*, Bull. Soc. Bot. France 43: 564. 1896 ('*Erythropalacées*')].
T.: *Erythropalum* Blume [*E. scandens* Blume]
B.H. 1: 347. 1862. — *Olacineae* tribus *Olaceae*, p.p.
E.P. Ed. 2. 20b: 401. 1942 (Sleumer). — *Erythropalaceae*.
Hutch. (1): 324. 1959. — *Erythropalaceae*.
See also Gagnepain, Bull. Soc. Bot. France 57: 373-380 (1910).

Erythroxylaceae *Kunth* in Humboldt, Bonpland et Kunth, Nov. Gen. et Sp. 5: 175. 1822 ('*Erythroxyleae*').
T.: *Erythroxylum* P. Browne [*E. areolatum* Linnaeus; vide I.N.G. 10/02296]
B.H. 1: 242. 1862. — *Lineae* tribus *Erythroxyleae*.
E.P. Ed. 2. 19a: 130. 1931 (O. E. Schulz). — *Erythroxylaceae*.
Hutch. (1): 263. 1959. — *Erythroxylaceae*.

Escalloniaceae *R. Brown* in Franklin, Narr. Journ. Polar Sea 766. 1823 ('*Escalloneae*').
T.: *Escallonia* Linnaeus f. [*E. myrtilloides* Linnaeus f.]
B.H. 1: 632. 1865. — *Saxifrageae* tribus *Escallonieae*, p.p.
E.P. Ed. 2. 18a: 211. 1930 (Engler). — *Saxifragaceae* subfam. *Escallonioideae*, p.p.
Hutch. (1): 165. 1959. — *Escalloniaceae*, p.p.
See also *Montiniaceae* and *Iteaceae*.

Eucommiaceae *Engler*, Syll. Pflanzenfam. ed. 6. 145. 1909 [*van Tieghem*, Journ. de Bot. 14: 274. 1900 ('*Eucommiacées*')].
T.: *Eucommia* Oliver [*E. ulmoides* Oliver]
E.P. Ed. 2. 18a: 348. 1930 (Harms). — *Eucommiaceae*.
Hutch. (1): 204. 1959. — *Eucommiaceae*.
Oliver (in Hooker, Ic. Pl. 20: sub *t. 1950.* 1890) regarded this genus as anomalous and of uncertain affinity. Later (*l.c.* 24: sub *t. 2361.* 1895) he agreed with Prantl that it should be referred to *Trochodendraceae*, together with *Cercidiphyllum*, which is itself

the type of a further family, *Cercidiphyllaceae*.

See also Harms (in E.P. Nachtr. 3. 111. 1906) under *Trochodendraceae*.

Eucryphiaceae *Endlicher*, Ench. Bot. 528. 1841 ('*Eucryphieae*').
T.: *Eucryphia* Cavanilles [*E. cordifolia* Cavanilles]
B.H. 1: 615. 1865. — *Rosaceae* tribus *Quillajeae*, p.p.
E.P. Ed. 2. 21: 47. 1925 (Gilg). — *Eucryphiaceae*.
Hutch. (1): 309. 1959. — *Eucryphiaceae*.

Euphorbiaceae *A. L. de Jussieu*, Gen. Pl. 384. 1789 ('*Euphorbiae*').
T.: *Euphorbia* Linnaeus [*E. antiquorum* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 157. 1929]
B.H. 3: 239. 1880. — *Euphorbiaceae*, excl. trib. *Buxeae*.
E.P. Ed. 2. 19c: 11. 1931 (Pax et K. Hoffmann). — *Euphorbiaceae*.
Hutch. (1): 270. 1959. — *Euphorbiaceae*.

Eupomatiaceae *Endlicher*, Ench. Bot. 425. 1841 ('*Eupomatieae*').
T.: *Eupomatia* R. Brown [*E. laurina* R. Brown]
B.H. 1: 29. 1862. — *Anonaceae*, genus anomalum.
E.P. 3 (2): 39. 1888 (Prantl). — *Anonaceae* tribus *Eupomatieae*.
Hutch. (1): 134. 1959. — *Eupomatiaceae*.

Robert Brown (in Flinders, Voy. Terra Austr. 2: 597. *t.* 2. 1814) referred *Eupomatia* to *Annonaceae*.

Eupteleaceae *Hayata*, Bot. Mag. Tokyo 39: (230). 1925. — *Makino et Nemoto*, Nippon-Shokub.-Soran (Fl. Japan) ed. 2. 306. 1931 [*van Tieghem*, Journ. de Bot. 14: 274. 1900 ('*Euptéléacées*')].
T.: *Euptelea* Siebold et Zuccarini [*E. polyandra* Siebold et Zuccarini]
B.H. 1: 954. 1867. — *Magnoliaceae* tribus *Trochodendreae*, p.p.
E.P. 3 (2): 23. 1888 (Prantl). — Genus *Trochodendracearum*.
Hutch. (1): 132. 1959. — *Trochodendraceae*, p.p.

See also A. C. Smith in Journ. Arnold Arb. 27: 175 (1946).

Fabaceae *Lindley*, Introd. Nat. Syst. ed. 2. 148. 1836. — Nom. alt.; *Leguminosae* vel *Papilionaceae*.
T.: *Faba* Miller (syn. *Vicia* Linnaeus, p.p.) [*Faba bona* Medicus; syn. *Vicia faba* Linnaeus]
B.H. 1: 434. 1865. — *Leguminosae*.
E.P. 3 (3): 70. 1891-94 (Taubert). — *Leguminosae*.
Hutch. (1): 152. 1959. — *Leguminales*, incl. *Papilionaceae*, *Caesalpiniaceae* et *Mimosaceae*.

Miller (Gard. Dict. abr. ed. 4. 1754) included two species in his genus *Faba* both of which were included (one as a variety) in the *Vicia faba* of Linnaeus (Sp. Pl. 737. 1753).

Fagaceae *Dumortier*, Anal. Fam. Pl. 11, 12. 1829 ('*Fagineae*').
T.: *Fagus* Linnaeus [*F. sylvatica* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 189. 1929]
B.H. 3: 403. 1880. — *Cupuliferae* tribus *Quercineae*.
E.P. 3 (1): 47. 1887-8 (Prantl). — *Fagaceae*.
Hutch. (1): 192. 1959. — *Fagaceae*.

Flacourtiaceae *A. P. Decandolle*, Prodr. 1: 255. 1824 ('*Flacourtianeae*').
T.: *Flacourtia* L'Héritier [*F. ramontchii* L'Héritier]
B.H. 1: 122. 1862, et 794. 1867. — *Bixineae* (excl. tribus *Bixeae*) et *Samydaceae*.
E.P. Ed. 2. 21: 377. 1925 (Gilg). — *Flacourtiaceae*, excl. tribus *Paropsieae* (vide infra, *Medusandraceae* et *Passifloraceae*), et subtribus *Dioncophyllineae* (vide supra, *Dioncophyllaceae*), et *l.c.* 152. 1925 (Melchior). — *Theaceae* tribus *Asteropeieae*.
Hutch. (1): 207. 1959. — *Flacourtiaceae*, excl. *Dioncophyllum* et gen. aff.

Flagellariaceae *Dumortier*, Anal. Fam. Pl. 59, 60. 1829.
T.: *Flagellaria* Linnaeus [*F. indica* Linnaeus]
B.H. 3: 860. 1883. — *Flagellarieae*.
E.P. Ed. 2. 15a: 6. 1930 (Engler). — *Flagellariaceae*.
Hutch. (2): 568. 1959. — *Flagellariaceae*.

Fouquieriaceae *A. P. Decandolle*, Prodr. 3: 349. 1828.
T.: *Fouquieria* Kunth [*F. formosa* Kunth]
B.H. 1: 160. 1862. — *Tamariscineae* tribus *Fouquiereae*.
E.P. 3 (6): 292, 298. 1895 (Niedenzu). — *Tamaricaceae* subfam. *Fouquierioideae*. — Nachtr. 251, 352. 1897 (Engler). — *Fouquieriaceae*.
Hutch. (1): 229. 1959. — *Fouquieriaceae*.

See also E.P. Nachtr. 3. 228. 1907 (Engler).

Francoaceae *A. de Jussieu*, Ann. Sc. Nat. 25: 9. 1832.
T.: *Francoa* Cavanilles [*F. appendiculata* Cavanilles]
B.H. 1: 631. 1865. — *Saxifrageae* tribus *Francoeae*.
E.P. Ed. 2. 18a: 166. 1930 (Engler). — *Saxifragaceae* subfam. *Saxifragoideae* tribus *Francoeae*.
Hutch. (1): 462. 1959. — *Francoaceae*.

Frankeniaceae *A. St.-Hilaire*, Mém. Plac. Centr. 39. 1815.
T.: *Frankenia* Linnaeus [*F. laevis* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 147. 1929]
B.H. 1: 140. 1862. — *Frankeniaceae*.
E.P. Ed. 2. 21: 276. 1925 (Niedenzu). — *Frankeniaceae*.
Hutch. (1): 228. 1959. — *Frankeniaceae*.

Fumariaceae *A. P. Decandolle*, Syst. Nat. 2: 105. 1821.
T.: *Fumaria* Linnaeus [*F. officinalis* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 173. 1929]
B.H. 1: 50. 1862. — *Papaveraceae* subordo *Fumarieae*.
E.P. Ed. 2. 17b: 121. 1936 (Fedde). — *Papaveraceae* subfam. *Fumarioideae*.
Hutch. (1): 423. 1959. — *Fumariaceae*.

Galacaceae *D. Don*, Edinburgh New Phil. Journ. 6: 53. 1828 ('*Galacinae*').
T.: *Galax* Linnaeus, nom. cons. [*G. aphylla* Linnaeus; — I.C.B.N. 262. 1956]
B.H. 2: 619. 1876. — *Diapensiaceae* tribus *Galacineae*.
E.P. 4 (1): 82. 1889 (Drude). — *Diapensiaceae* tribus *Galacineae*.
Hutch. (1): 293. 1959. — *Diapensiaceae*, p.p.
It is proposed that *Galacaceae* should be rejected in favour of *Diapensiaceae* in case of union of the two families.

Garryaceae *Lindley*, Bot. Reg. 20: sub *t. 1686*. 1834.
T.: *Garrya* Lindley [*G. elliptica* Lindley]
B.H. 1: 951. 1867. — *Cornaceae*, p.p.
E.P. 3 (8): 255, 256. 1898 (Harms). — *Cornaceae* subfam. *Garryoideae*.
Hutch. (1): 174. 1959. — *Garryaceae*.
In E.P. Nachtr. 4: 62. 1914 (Pilger et K. Krause), family rank was restored to *Garryaceae*, it having been monographed (1910) by Wangerin in Engler's Pflanzenreich. See also Eastwood in Bot. Gaz. 36: 456 (1903).

Geissolomataceae *Endlicher*, Ench. Bot. 214. 1841 ('*Geissolomeae*').
T.: *Geissoloma* Kunth [*G. marginatum* (Linnaeus) Kunth; vide Phillips, Gen. S. Afr. Fl. Pl. ed. 2. 523. 1951]
B.H. 3: 203. 1880. — *Penaeaceae*, genus anomalum.
E.P. 3 (6a): 205. 1894 (Gilg). — *Geissolomaceae*.
Hutch. (1): 214. 1959. — *Geissolomataceae*.

Gentianaceae *A. L. de Jussieu*, Gen. Pl. 141. 1789 ('*Gentianae*').
T.: *Gentiana* Linnaeus [*G. lutea* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 138. 1929]
B.H. 2: 799. 1876. — *Gentianeae*, excl. tribus *Menyantheae*.
E.P. 4 (2): 50. 1895 (Gilg). — *Gentianaceae* subfam. *Gentianoideae*.
Hutch. (1): 450. 1950. — *Gentianaceae*.

Geosiridaceae *Jonker*, Rec. Trav. Bot. Neérland. 36: 477. 1939.
T.: *Geosiris* Baillon [*G. aphylla* Baillon]
E.P. Nachtr. 96. 1897 (Engler). — *Burmanniaceae* p.p. (dub.).
Hutch. (2): 687. 1959. — Gen. dub. sub *Burmanniaceae*.

Geraniaceae *A. L. de Jussieu*, Gen. Pl. 268. 1789 ('*Gerania*').
T.: *Geranium* Linnaeus [*G. sylvaticum* Linnaeus; vide Britton et Brown, Ill. Fl. ed. 2. 2: 426. 1913]
B.H. 1: 269. 1862. — *Geraniaceae* tribus *Geranieae* et tribus *Pelargonieae* p.p.
E.P. Ed. 2. 19a: 43. 1931 (Knuth). — *Geraniaceae*, p.p.
Hutch. (1): 495. 1959. — *Geraniaceae*.

Gesneriaceae *C. G. Nees*, Ann. Sc. Nat. 6: 290. 1825 ('*Gesnerieae*').
T.: *Gesneria* Linnaeus [*G. humilis* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 167. 1929]
B.H. 2: 990. 1876. — *Gesneraceae*.
E.P. 4 (3b): 133. 1893-4 (K. Fritsch). — *Gesneriaceae*.
Hutch. (1): 491. 1959. — *Gesneriaceae*.

Globulariaceae *A. P. Decandolle* in Lamarck, Fl. Franç. ed. 3. 3: 427. 1805 ('*Globulariae*').
T.: *Globularia* Linnaeus [*G. vulgaris* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 123. 1929]
B.H. 2: 1130. 1876. — *Selagineae*, p.p.

E.P. 4 (3b): 270. 1895 (R. Wettstein). — *Globulariaceae.*
Hutch. (1): 505. 1959. — *Globulariaceae.*

Gomortegaceae *Reiche,* Ber. Deutsch. Bot. Ges. 14: 232. *t. 16.* 1896.
T.: *Gomortega* Ruiz et Pavon [*G. nitida* Ruiz et Pavon]
B.H. 3: 149. 1880. — Genus anomalum.
E.P. Nachtr. 172, 347. 1897 (Harms). — *Gomortegaceae.*
Hutch. (1): 140. 1959. — *Gomortegaceae.*
See also W. L. Stern in Amer. Journ. Bot. 42: 874 (1955).

Gonystylaceae *van Tieghem,* Ann. Sc. Nat. sér. 7. 17: 248. 1893 ('*Gonystyleae*').
T.: *Gonystylus* Teijsmann et Binnendijk [*G. miquelianus* Teijsmann et Binnendijk]
B.H. 3: 201. 1880. — *Thymelaeaceae,* genus anomalum.
E.P. Nachtr. 231, 351. 1897 (Gilg). — *Gonystylaceae.*
Hutch. (1): 212. 1959. — *Gonystylaceae.*

Goodeniaceae *R. Brown,* Prodr. 573. 1810 ('*Goodenoviae*').
T.: *Goodenia* J. E. Smith [*G. ramosissima* J. E. Smith; I.N.G. 4/01531]
B.H. 2: 536. 1876. — *Goodenovieae,* excl. *Brunonia.*
E.P. 4 (5): 70. 1889 (Schönland). — *Goodeniaceae,* excl. subfam. *Brunonioideae.*
Hutch. (1): 478. 1959. — *Goodeniaceae.*

Goupiaceae *Miers,* Bot. 2: 134. *t. 74.* 1860-69.
T.: *Goupia* Aublet [*G. glabra* Aublet; vide Bullock, Kew Bull. 1959: ined.]
B.H. 1: 369. 1862. — *Celastrineae* tribus *Celastreae,* p.p.
E.P. Ed. 2. 20b: 193. 1942 (Loesener). — *Celastraceae* subfam. *Goupioideae.*
Hutch. (1): 322. 1959. — *Goupiaceae.*
See also Metcalfe and Chalk, Anat. Dicot. 1: 397 (1950).

Gramineae *A. L. de Jussieu,* Gen. Pl. 28. 1789. — Nom. alt.; *Poaceae.*
T.: *Poa* Linnaeus [*P. pratensis* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 120. 1929]
B.H. 3: 1074. 1883. — *Gramineae.*
E.P. 2 (2): 1. 1887 (Hackel). — *Gramineae.*
Hutch. (2): 710. 1959. — *Gramineae.*

Greyiaceae *J. Hutchinson,* Fam. Fl. Pl. 1: 202. *fig. 140.* 1926.
T.: *Greyia* W. J. Hooker et Harvey [*G. sutherlandii* W. J. Hooker et Harvey]
B.H. 1: 1000. 1867. — *Sapindaceae* tribus *Meliantheae,* p.p. (addit.).
E.P. 3 (5): 382. 1895 (Gürke). — *Melianthaceae* tribus *Greyieae.*
Hutch. (1): 164. 1959. — *Greyiaceae.*

Grossulariaceae A. P. Decandolle in Lamarck, Fl. Franç. ed. 3. 5: 405. 1805 ('*Grossulariae*').
T.: *Ribes* Linnaeus [*R. rubrum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 247. 1929. — I.N.G. 16/01961]
B.H. 1: 633. 1865. — *Saxifrageae* tribus *Ribesieae.*
E.P. Ed. 2. 18a: 168. 1930 (Engler). — *Saxifragaceae* subfam. *Saxifragoideae* tribus *Ribesieae.*
Hutch. (1): 162. 1959. — *Grossulariaceae.*

Grubbiaceae *Endlicher,* Ench. Bot. 403. 1841.
T.: *Grubbia* Bergius [*G. rosmarinifolius* Bergius]
B.H. 3: 220. 1880. — *Santalaceae* tribus *Grubbieae* (vel genus anomalum).
E.P. Ed. 2. 16b: 46. 1935 (Harms). — *Grubbiaceae.*
Hutch. (1): 338. 1959. — *Grubbiaceae.*

Guttiferae *A. L. de Jussieu,* Gen. Pl. 255. 1789. — Nom. alt.; *Clusiaceae.*
T.: *Clusia* Linnaeus [*C. major* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 160. 1929]
B.H. 1: 167. 1862. — *Guttiferae,* excl. tribus *Quiineae.*
E.P. Ed. 2. 21: 154. 1925 (Engler). — *Guttiferae,* excl. subfam. *Hypericoideae* et al.
Hutch. (1): 298. 1959. — *Clusiaceae.*

Hypericaceae is included in *Guttiferae* by some authors, but in these circumstances the latter is the correct name under Art. 57 of the Paris Code (1956). See also note under *Clusiaceae.*

Gyrostemonaceae *Endlicher,* Ench. Bot. 509. 1841 ('*Gyrostemoneae*').
T.: *Gyrostemon* Desfontaines [*G. ramulosum* Desfontaines]
B.H. 3: 80. 1880. — *Phytolaccaceae* tribus *Gyrostemoneae.*
E.P. Ed. 2. 16c: 165. 1934 (Heimerl). — *Gyrostemonaceae.*
Hutch. (1): 436. 1959. — *Gyrostemonaceae.*
See also H. Walter (in Engler Pflanzenr. *Phytolaccaceae,* 1909) where the family is treated as a tribe (*Gyrostemoneae*) of *Phytolaccaceae.*

Haemodoraceae *R. Brown*, Prodr. 299. 1810.
T.: *Haemodorum* J. E. Smith [*H. planifolium* R. Brown; vide Bullock, Kew Bull. 1959; ined.]
B.H. 3: 671. 1883. — *Haemodoraceae*, p.p.
E.P. Ed. 2. 15a: 386. 1930 (Pax). — *Haemodoraceae*.
Hutch. (2): 674. 1959. — *Haemodoraceae*.

Haloragaceae * *R. Brown* in Flinders, Voy. Terra Austr. 2: 549. 1814 ('*Haloragaceae*').
T.: *Haloragis* J. R. et G. Forster [*H. prostrata* J. R. et G. Forster]
B.H. 1: 673. 1865. — *Halorageae*, p.p. (excl. *Callitriche* Linnaeus).
E.P. 3 (7): 226. 1893 (O. G. Peterson). — *Halorrhagidaceae*, p.p.
Hutch. (1): 448. 1959. — *Haloragidaceae* (excl. *Hippuridaceae*).

Hamamelidaceae *R. Brown* in Abel, Narr. Journ. China 374. 1818 ('*Hamamelideae*').
T.: *Hamamelis* Linnaeus [*H. virginiana* Linnaeus]
B.H. 1: 664. 1865. — *Hamamelideae*.
E.P. Ed. 2. 18a: 303. 1930 (Harms). — *Hamamelidaceae*.
Hutch. (1): 180. 1959. — *Hamamelidaceae*.

Helleboraceae *Loiseleur*, Man. Pl. Us. Indig. 1: 1. 1819.
T.: *Helleborus* Linnaeus [*H. niger* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 164. 1929]
B.H. 1: 2. 1862. — *Ranunculaceae* tribus *Helleboreae*.
E.P. 3 (2): 55. 1888 (Prantl). — *Ranunculaceae* tribus *Helleboreae*.
Hutch. (1): 401. 1959. — *Helleboraceae*.

Hernandiaceae *Blume*, Bijdr. 550. 1825 ('*Hernandieae*').
T.: *Hernandia* Linnaeus [*H. sonora* Linnaeus]
B.H. 3: 149, 164. 1880. — *Laurineae* tribus *Hernandieae*.
E.P. 3 (2): 126. 1889 (Pax). — *Hernandiaceae*.
Hutch. (1): 141. 1959. — *Hernandiaceae*.

Heteropyxidaceae *Engler et Gilg*, Syll. Pflanzenfam. ed. 9-10. 299. 1924.
T.: *Heteropyxis* Harvey, nom. cons. prop., vide Bullock, Taxon 6: 58. 1957 [*H. natalensis* Harvey]
B.H. 1: 785. 1867. — *Lythrarieae*, genus anomalum.
E.P. Nachtr. 335. 1897 (Engler). — *Lythraceae* subfam. *Heteropyxidioideae*.
Hutch. (1): 341. 1959. — *Heteropyxidaceae*.

Himantandraceae *Diels* in Engler, Bot. Jahrb. 55: 126. 1917.
T.: *Himantandra* Diels, nom. cons. prop., vide Buchheim et A. C. Smith, Taxon 5: 198. 1956 [*H. belgraveana* (F. von Mueller) Diels]
Hutch. (1): 130. 1959. — *Himantandraceae*.
The correct name for the genus *Himantandra* is *Galbulimima* F. M. Bailey [holotype: *G. baccata* F. M. Bailey] and conservation of *Himantandra* has been opposed (Bullock, Kew Bull. 1957: 409. 1958).

Hippocastanaceae *A. P. Decandolle*, Prodr. 1: 597. 1824 ('*Hippocastaneae*').
T.: *Aesculus* Linnaeus (syn. *Hippocastanum* Gaertner) [*A. hippocastanum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 149. 1929]
B.H. 1: 398. 1862. — *Sapindaceae* tribus *Sapindeae*, p.p.
E.P. 3 (5): 273. 1895 (Pax). — *Hippocastanaceae*.
Hutch. (1): 365. 1959. — *Hippocastanaceae*.

Hippocrateaceae *A. de Jussieu*, Ann. Mus. Hist. Nat. Paris 18: 486. 1811 ('*Hippocrateaceae*').
T.: *Hippocratea* Linnaeus [*H. volubilis* Linnaeus]
B.H. 1: 360. 1862. — *Celastrineae* tribus *Hippocrateae*.
E.P. Ed. 2. 20b: 198. 1942 (Loesener). — *Hippocrateaceae*.
Hutch. (1): 324. 1959. — *Hippocrateaceae*.
As noted under *Celastraceae*, certain authors do not regard *Hippocrateaceae* as distinct. In case of union of the two families it is proposed that the earlier name, *Hippocrateaceae*, should be rejected in favour of *Celastraceae*.

Hippuridaceae *Link*, Enum. Pl. Berol. Alt. 1: 5. 1821 ('*Hippurideae*').
T.: *Hippuris* Linnaeus [*H. vulgaris* Linnaeus]
B.H. 1: 675. 1865. — *Halorageae*, p.p.
E.P. 3 (7): 231, 237. 1893 (O. G. Petersen). — *Halorrhagidaceae* tribus *Hippureae*.
Hutch. (1): 448. 1959. — *Haloragidaceae*, p.p.

Hoplestigmataceae *Gilg* in Engler, Bot Jahrb. 40, Beibl. 93: 80. 1908.
T.: *Hoplestigma* Pierre [*H. klaineanum* Pierre]
E.P. Nachtr. 3: 349. 1908 (Gilg). — *Hoplestigmataceae*.
Hutch. (1): 209. 1959. — *Hoplestigmataceae*.

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* There seems to be no justification for the form "*Haloragidaceae*".

Huaceae *A. Chevalier,* Rev. Internat. Bot. Appliq. 27: 28. 1947 ('*Huacaceae*').
T.: *Hua* Pierre ex De Wildeman [*H. gabonii* Pierre ex De Wildeman]
E.P. Nachtr. 4. 201. 1914 (Pilger et K. Krause). — *Sterculiaceae* tribus *Huaeae.*
Hutch. (1): 262. 1959. — *Huaceae.*
The tribe *Huaeae* (*Sterculiaceae*) was suggested by Pierre and published by De Wildeman in Ann. Mus. Congo, Sér. 5. 1: 289 (1905).

Humiriaceae *A. de Jussieu* in A. St.-Hilaire, Fl. Bras. Merid. 2: 87. 1829.
T.: *Humiria* A. St.-Hilaire, nom. cons. [*H. balsamifera* (Aublet) A. St.-Hilaire; vide I.C.B.N. 247. 1956]
B.H. 1: 246. 1862. — *Humiriaceae.*
E.P. Ed. 2. 19a: 126. 1931 (Winkler). — *Linaceae* subfam. *Humirioideae.*
Hutch. (1): 259. 1959. — *Humiriaceae.*

Hydnoraceae *C. H. Agardh,* Aphor. Bot. 88. 1821 ('*Hydnoriae*').
T.: *Hydnora* Thunberg [*H. africana* Thunberg]
B.H. 3: 117. 1880. — *Cytinaceae* tribus *Hydnoreae.*
E.P. Ed. 2. 16b: 282. 1935 (Harms). — *Hydnoraceae.*
Hutch. (1): 415. 1959. — *Hydnoraceae.*

Hydrangeaceae *Dumortier,* Anal. Fam. Pl. 36, 38. 1829.
T.: *Hydrangea* Linnaeus [*H. arborescens* Linnaeus]
B.H. 1: 631. 1865. — *Saxifrageae* tribus *Hydrangeae.*
E.P. Ed. 2. 18a: 200. 1930 (Engler). — *Saxifragaceae* subfam. *Hydrangeoideae* tribus *Hydrangeeae.*
Hutch. (1): 161. 1959. — *Hydrangeaceae.*

Hydrocharitaceae *A. L. de Jussieu,* Gen. Pl. 67. 1789 ('*Hydrocharides*').
T.: *Hydrocharis* Linnaeus [*H. morsus-ranae* Linnaeus]
B.H. 3: 448. 1883. — *Hydrocharideae.*
E.P. 2 (1): 238. 1889 (Ascherson et Gürke). — *Hydrocharitaceae.*
Hutch. (2): 538. 1959. — *Hydrocharitaceae.*

Hydrophyllaceae *R. Brown ex Edwards,* Bot. Reg. 3: sub *t.* 242. 1817 ('*Hydrophylleae*').
T.: *Hydrophyllum* Linnaeus [*H. virginianum* Linnaeus]
B.H. 2: 825. 1876. — *Hydrophyllaceae.*
E.P. 4 (3a): 54. 1893 (A. Peter). — *Hydrophyllaceae.*
Hutch. (1): 501. 1959. — *Hydrophyllaceae.*

Hydrostachyaceae * *Engler* in Engler, Bot. Jahrb. 20: 136. 1894 ('*Hydrostachydaceae*').
T.: *Hydrostachys* Thouars [*H. verruculosa* A. de Jussieu; vide Bullock, Kew Bull. 1959: ined.]
B.H. 3: 108, 115. 1880. — *Podostemaceae* tribus *Hydrostachydeae.*
E.P. 3 (2): 22. 1890 (O. Warming). — *Podostemaceae* tribus *Hydrostachyoideae.*
Hutch. (1): 470. 1959. — *Hydrostachyaceae.*

Hypericaceae *A. L. de Jussieu,* Gen. Pl. 254. 1789 ('*Hyperica*').
T.: *Hypericum* Linnaeus [*H. perforatum* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 177. 1929]
B.H. 1: 163. 1862. — *Hypericineae.*
E.P. Ed. 2. 21: 174. 1925 (Engler et Keller). — *Guttiferae* subfam. *Hypericoideae.*
Hutch. (1): 297. 1959. — *Hypericaceae.*
If this family is united with *Guttiferae* (*Clusiaceae*), the correct name under Art. 57 of the Paris Code (1956) is *Guttiferae* (*Clusiaceae*). See also note under *Clusiaceae.*

Hypoxidaceae *R. Brown* in Flinders, Voy. Terra Austr. 2: 576. 1814 ('*Hypoxideae*').
T.: *Hypoxis* Linnaeus [*H. erecta* Linnaeus ≡ *H. hirsuta* (Linnaeus) Coville; vide Britton et Brown, Ill. Fl. ed. 2. 1: 534. 1913]
B.H. 3: 712. 1883. — *Amaryllideae* tribus *Hypoxideae.*
E.P. Ed. 2. 15a: 425. 1930 (Pax et K. Hoffmann). — *Amaryllidaceae* subfam. *Hypoxidoideae* tribus *Hypoxideae.*
Hutch.(2): 678. 1959. — *Hypoxidaceae.*

Icacinaceae *Miers,* Ann. Mag. Nat. Hist. ser. 2. 9: 221. 1852.
T.: *Icacina* A. de Jussieu [*I. senegalensis* A. de Jussieu]
B.H. 1: 344. 1862. — *Olacineae* tribus *Icacineae.*
E.P. Ed. 2. 20b: 323. 1942 (Sleumer). — *Icacinaceae.*
Hutch. (1): 316. 1959. — *Icacinaceae.*

Illecebraceae *R. Brown,* Prodr. 413. 1810 ('*Illecebreae*').
T.: *Illecebrum* Linnaeus [*I. verticillatum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 135. 1929]
B.H. 3: 12. 1880. — *Illecebraceae.*
E.P. Ed. 2. 16c: 303. 1934 (Pax et K. Hoffmann). — *Caryophyllaceae* subfam. *Paronychioideae* tribus *Paronychieae* subtribus *Illecebrineae.*
Hutch. (1): 432. 1959. — *Illecebraceae.*

* There seems to be no justification for either "*Hydrostachydaceae*" or "*Hydrostachyoaceae*".

Illiciaceae *Hu*, Bull. Chin. Bot. Soc. 1: 86. 1935 [*van Tieghem*, Journ. de Bot. 14: 353. 1900 ('*Illiciacées*')].
T.: *Illicium* Linnaeus [*I. anisatum* Linnaeus]
B.H. 1: 18. 1862. — *Magnoliaceae* tribus *Wintereae*, p.p.
E.P. 3 (2): 18. 1888 (Prantl). — *Magnoliaceae* tribus *Illicieae*, p.p.
Hutch. (1): 125. 1959. — *Illiciaceae*.
See also A. C. Smith in Journ. Arnold Arb. 24: 120 (1943) and in Sargentia 7: 8 (1947).

Iridaceae *A. L. de Jussieu*, Gen. Pl. 57. 1789 ('*Irides*').
T.: *Iris* Linnaeus [*I. germanica* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 118. 1929]
B.H. 3: 681. 1883. — *Irideae*.
E.P. Ed. 2. 15a: 463. 1930 (Diels). — *Iridaceae*.
Hutch. (2): 647. 1959. — *Iridaceae*.

Irvingiaceae *Exell et Mendonça*, Consp. Fl. Angol. 1: 279, 395. 1951 [*Pierre*, Bull. Soc. Linn. Paris (2): 1233. 1896 ('*Irvingiacées*')].
T.: *Irvingia* J. D. Hooker [*I. smithii* J. D. Hooker; vide Bullock, Kew Bull. 1959: ined.]
B.H. 1: 314. 1862. — *Simarubeae* tribus *Picramnieae*, p.p. min.
E.P. Ed. 2. 19a: 396. 1931 (Engler ‡). — *Simarubaceae* subfam. *Irvingioideae*.
Hutch. (1): 261. 1959. — *Irvingiaceae*.

Iteaceae *J. G. Agardh*, Theoria Syst. Pl. Fam. Phan. 151. 1858.
T.: *Itea* Linnaeus [*I. virginica* Linnaeus]
B.H. 1: 632. 1865. — *Saxifrageae* tribus *Escallonieae*, p.p.
E.P. 3 (2a): 81. 1890 (Engler). — *Saxifragaceae* subfam. *Escallonioideae*, p.p.
Hutch. (1): 165. 1959. — *Escalloniaceae*, p.p.

Ixonanthaceae *Exell et Mendonça*, Consp. Fl. Angol. 1: 246, 391. 1951, et Bol. Soc. Brot. ser. 2a. 25: 105. 1951 [*Planchon ex Klotzsch*, Phys. Abh. K. Akad. Wiss. Berlin 1856: 235. 1857 ('*Ixonantheen*').
T.: *Ixonanthes* Jack [*I. icosandra* Jack; vide Bullock, Kew Bull. 1959: ined.]
B.H. 1: 242. 1862. — *Lineae* tribus *Ixonantheae*.
E.P. Ed. 2. 19a: 123. 1931 (Winkler). — *Linaceae* subfam. *Ixonanthoideae*.
Hutch. (1): 256. 1959. — *Ixonanthaceae*.

Juglandaceae *Kunth*, Ann. Sc. Nat. 2: 343. 1824 ('*Juglandeae*').
T.: *Juglans* Linnaeus [*J. regia* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 189. 1929]
B.H. 3: 397. 1880. — *Juglandeae*.
E.P. 3 (1): 19. 1887 (Engler). — *Juglandaceae*.
Hutch. (1): 195. 1959. — *Juglandaceae*.

Julianiaceae *W. B. Hemsley*, Journ. Bot. 44: 379. 1906.
T.: *Juliania* Schlechtendal, nom. cons. prop.; vide Wilson et Bullock, Taxon 6: 234. 1957 [*J. adstringens* (Schlechtendal) Schlechtendal]
B.H. 1: 428. 1862. — *Anacardiaceae*, genus anomalum.
E.P. Nachtr. 335. 1897 (Harms). — Genus anomalum.
Hutch. (1): 368. 1959. — *Julianiaceae*.
Family status for *Juliania* was agreed by Pilger and K. Krause in E.P. Nachtr. 4. 64. 1914.

Juncaceae *A. L. de Jussieu*, Gen. Pl. 43. 1789 ('*Junci*').
T.: *Juncus* Linnaeus [*J. acutus* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 147. 1929]
B.H. 3: 861. 1883. — *Juncaceae*, p.p. excl. trib. *Xeroteae*, genus anom. etc.
E.P. Ed. 2. 15a: 192. 1930 (Vierhapper). — *Juncaceae*.
Hutch. (2): 697. 1959. — *Juncaceae*.

Juncaginaceae *L. C. Richard*, Demonstr. Bot. p. ix. 1808 ('*Juncagines*').
T.: *Triglochin* Linnaeus (syn. *Juncago* P. C. Fabricius) [*T. palustris* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 148. 1929]
B.H. 3: 1010. 1883. — *Naiadaceae* tribus *Juncagineae*, p.p.
E.P. 2 (1): 222. 1889 (Buchenau et Hieronymus). — *Juncaginaceae*, p.p.
Hutch. (2): 548. 1959. — *Juncaginaceae*.

Koeberliniaceae *Engler* in Engler et Prantl, Nat. Pflanzenfam. 3 (6): 319. *fig. 148*. 1895.
T.: *Koeberlinia* Zuccarini [*K. spinosa* Zuccarini]
B.H. 1: 315. 1862. — *Simarubeae* tribus *Picramnieae*, p.p.
E.P. 3 (6): 319. 1895 (Engler). — *Koeberliniaceae*.
Hutch. (1): 313. 1959. — *Koeberliniaceae*.
See also van Tieghem in Journ. de Bot. 14: 1-12 (1900).

Krameriaceae *Dumortier*, Anal. Fam. Pl. 20, 23. 1829.
T.: *Krameria* Loefling [*K. ixine* Linnaeus]
B.H. 1: 140. 1862. — *Polygaleae*, p.p.
E.P. 3 (3): 166. 1892 (Taubert). — *Leguminosae* subfam. *Caesalpinioideae* tribus *Krameriaeae*.
Hutch. (1): 233. 1959. — *Krameriaceae*.

Labiatae *A. L. de Jussieu,* Gen. Pl. 110. 1789. Nom. alt.; *Lamiaceae.*
T.: *Lamium* Linnaeus [*L. album* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 165. 1929]
B.H. 2: 1160. 1876. — *Labiatae.*
E.P. 4 (3a): 183. 1895 (Briquet). — *Labiatae.*
Hutch. (1): 506. 1959. — *Labiatae.*

Lacistemataceae *Martius,* Nov. Gen. et Sp. 1: 154. 1826 (*'Lacistemeae'*).
T.: *Lacistema* Swartz [*L. myricoides* Swartz]
B.H. 3: 412. 1880. — *Lacistemaceae.*
E.P. Ed. 2. 21: 321. 1925 (K. Krause). — *Lacistemaceae.*
Hutch. (1): 211. 1959. — *Lacistemaceae.*

Lactoridaceae *Engler* in Engler, Bot. Jahrb. 8: 53. 1887.
T.: *Lactoris* Philippi [*L. fernandeziana* Philippi]
B.H. 3: 126, 127. 1880. — *Piperaceae* tribus *Saurureae,* p.p.
E.P. 3 (2): 19. 1888 (Engler). — *Lactoridaceae.*
Hutch. (1): 131. 1959. — *Lactoridaceae.*

Lamiaceae *Lindley,* Introd. Nat. Syst. ed. 2. 275. 1836. — Nom. alt.; *Labiatae.*
T.: *Lamium* Linnaeus [*L. album* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 165. 1929]
B.H. 2: 1160. 1876. — *Labiatae.*
E.P. 4 (3a): 183. 1895 (Briquet). — *Labiatae.*
Hutch. (1): 506. 1959. — *Labiatae.*

Lardizabalaceae *Decaisne,* Arch. Mus. Hist. Nat. Paris 1: 185. *t. 10-13.* 1839 (*'Lardizabaleae'*).
T.: *Lardizabala* Ruiz et Pavon [*L. biternata* Ruiz et Pavon; vide Bullock, Kew Bull. 1959: ined.]
B.H. 1: 40. 1862. — *Berberideae* tribus *Lardizabaleae.*
E.P. 3 (2): 67. 1888 (Prantl). — *Lardizabalaceae.*
Hutch. (1): 408. 1959. — *Lardizabalaceae.*

Lauraceae *A. L. de Jussieu,* Gen. Pl. 80. 1789 (*'Lauri'*).
T.: *Laurus* Linnaeus [*L. nobilis* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 151. 1929]
B.H. 3: 146. 1880. — *Laurineae,* excl. trib. *Hernandieae.*
E.P. 3 (2): 106. 1889 (Pax). — *Lauraceae.*
Hutch. (1): 139. 1959. — *Lauraceae.*

Lecythidaceae *Poiteau,* Mém. Mus. Hist. Nat. Paris 13: 143. *tt. 2-8.* 1825 (*'Lecythidae'*).
T.: *Lecythis* Loefling [*L. ollaria* Linnaeus; vide I.N.G. 39/04898]
B.H. 1: 695. 1865. — *Myrtaceae* tribus *Lecythideae.*
E.P. 3 (7): 26. 1892 (Niedenzu). — *Lecythidaceae.*
Hutch. (1): 303. 1959. — *Lecythidaceae.*

Ledocarpaceae *Meyen,* Reise 1: 308. 1834 (*'Ledocarpeae'*).
T.: *Balbisia* Cavanilles, nom. cons. (syn. *Ledocarpon* Desfontaines, nom. rejic.) [*B. verticillata* Cavanilles; I.C.B.N. 247. 1956]
B.H. 1: 270. 1862. — *Geraniaceae* tribus *Wendtieae.*
E.P. 3 (4): 12. 1890 (Reiche). — *Geraniaceae* tribus *Wendtieae.* — Ed. 2. 19a: 65. 1931 (Knuth). — *Geraniaceae* tribus *Wendtieae.*
Hutch. (1): 263. 1959. — *Ledocarpaceae.*

Leeaceae *Dumortier,* Anal. Fam. Pl. 21, 27. 1829.
T.: *Leea* Linnaeus [*L. aequata* Linnaeus]
B.H. 1: 388. 1862. — *Ampelidae,* p.p.
E.P. 3 (5): 454. 1896 (Gilg). — *Vitaceae* subfam. *Leeoideae.* — Ed. 2. 20d: 372. 1953 (Suessenguth). — *Leeaceae.*
Hutch. (1): 344. 1959. — *Vitaceae,* p.p.

Leguminosae *A. L. de Jussieu,* Gen. Pl. 345. 1789. — Nom. alt.; *Fabaceae,* incl. *Papilionaceae.*
T.: *Faba* Miller (syn. *Vicia* Linnaeus, p.p.) [*Faba bona* Medicus; syn. *Vicia faba* Linnaeus]
B.H. 1: 434. 1865. — *Leguminosae,* incl. subord. *Papilionaceae* (p. 437), *Caesalpinieae* (p. 457) et *Mimoseae* (p. 462).
E.P. 3 (3): 70. 1891-94 (Taubert). — *Leguminosae,* sensu lato.
Hutch. (1): 152. 1959. — *Leguminales,* incl. *Papilionaceae, Mimosaceae, Caesalpiniaceae.*

Leitneriaceae *Bentham* in Bentham et J. D. Hooker, Gen. Pl. 3: 396. 1880 (*'Leitnerieae'*).
T.: *Leitneria* Chapman [*L. floridana* Chapman]
B.H. 3: 396. 1880. — *Leitnerieae.*
E.P. 3 (1): 28. 1887 (Engler). — *Leitneriaceae.*
Hutch. (1): 188. 1959. — *Leitneriaceae.*

Lemnaceae *S. F. Gray,* Nat. Arr. Brit. Pl. 2: 729. 1821 (*'Lemnadeae'*).

T.: *Lemna* Linnaeus [*L. minor* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 187. 1929]
B.H. 3: 1000. 1883. — *Lemnaceae.*
E.P. 2 (3): 154. 1889 (Engler). — *Lemnaceae.*
Hutch. (2): 635. 1959. — *Lemnaceae.*

Lennoaceae *Solms-Laubach,* Fam. Lenn. (Abhandl. Naturforsch. Ges. Halle 11:) 56. *tt. 1-3.* 1870.
T.: *Lennoa* La Llave et Lexarza [*L. madreporoides* Lexarza]
B.H. 2: 621. 1876. — *Lennoaceae.*
E.P. 4 (1): 12. 1889 (Drude). — *Lennoaceae.*
Hutch. (1): 295. 1959. — *Lennoaceae.*

Lentibulariaceae *L. C. Richard* in Poiteau et Turpin, Fl. Paris 1: 26. 1808 (*'Lentibularieae'*).
T.: *Utricularia* Linnaeus (syn. *Lentibularia* Adanson) [*U. vulgaris* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 116. 1929]
B.H. 2: 986. 1876. — *Lentibularieae.*
E.P. 4 (3b): 108. 1893 (Kamienski). — *Lentibulariaceae.*
Hutch. (1): 492. 1959. — *Lentibulariaceae.*

Lepidobotryaceae *J. Léonard,* Bull. Jard. Bot. Brux. 20: 31. 1950.
T.: *Lepidobotrys* Engler [*L. staudtii* Engler]
E.P. Ed. 2. 19a: 40. 1931 (Knuth). — *Oxalidaceae,* p.p.
Hutch. (1): 266. 1959. — *Lepidobotryaceae.*
See also Tisserant, Bull. Soc. Bot. France 96: 214 (1950). Hutchinson (1959) extended the limits of the family to include the genera *Sarcotheca* and *Dapania.*

Lilaeaceae *Dumortier,* Anal. Fam. Pl. 62, 65. 1829 (*'Lilaearieae'*).
T.: *Lilaea* Humboldt et Bonpland [*L. subulata* Humboldt et Bonpland]
B.H. 3: 1010. 1883. — *Naiadaceae* tribus *Juncagineae,* p.p.
E.P. 2 (1): 225. 1889 (Buchenau et Hieronymus). — *Juncaginaceae,* p.p.
Hutch. (2): 549. 1959. — *Lilaeaceae.*

Liliaceae *A. L. de Jussieu,* Gen. Pl. 49. 1789 (*'Lilia'*).
T.: *Lilium* Linnaeus [*L. candidum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 145. 1929]
B.H. 3: 748. 1883. — *Liliaceae,* p.p.
E.P. Ed. 2. 15a: 227. 1930 (K. Krause). — *Liliaceae,* p.p.
Hutch. (2): 591. 1959. — *Liliaceae,* p.p.
See also *Amaryllidaceae, Alliaceae, Nartheciaceae, Asparagaceae, Melanthiaceae,* etc.

Limnanthaceae *R. Brown,* London, Edinburgh and Dublin Phil. Mag. 3: 70. 1833 (*'Limnantheae'*).
T.: *Limnanthes* R. Brown, nom. cons. [*L. douglasii* R. Brown; vide I.C.B.N. 252. 1956]
B.H. 1: 270. 1862. — *Geraniaceae* tribus *Limnantheae.*
E.P. 3 (5): 136. 1892 (Reiche). — *Limnanthaceae.*
Hutch. (1): 496. 1959. — *Limnanthaceae.*

Linaceae *S. F. Gray,* Nat. Arr. Brit. Pl. 2: 639. 1821 (*'Lineae'*).
T.: *Linum* Linnaeus [*L. usitatissimum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 143. 1929]
B.H. 1: 241. 1862. — *Lineae* tribus *Eulineae* et tribus *Hugonieae.*
E.P. Ed. 2. 19a: 82. 1931 (Winkler). — *Linaceae* subfam. *Linoideae.*
Hutch. (1): 260. 1959. — *Linaceae.*

Lissocarpaceae *Gilg* in Engler et Gilg, Syll. Pflanzenfam. ed. 9-10, 324. 1924.
T.: *Lissocarpa* Bentham [*L. benthamii* Gürke]
B.H. 2: 671. 1876. — *Styraceae,* p.p.
E.P. 4 (1): 180. 1891 (Gürke). — *Styracaceae,* p.p.
Hutch. (1): 168. 1959. — *Lissocarpaceae.*

Loasaceae *A. L. de Jussieu,* Ann. Mus. Hist. Nat. Paris 5: 21. *tt. 1-5.* 1804 (*'Loaseae'*).
T.: *Loasa* Adanson [*L. urens* N. J. Jacquin; vide Bullock, Kew Bull. 1959: ined.]
B.H. 1: 801. 1867. — *Loaseae.*
E.P. Ed. 2. 21: 522. 1925 (Gilg). — *Loasaceae.*
Hutch. (1): 237. 1959. — *Loasaceae.*

Lobeliaceae *A. L. de Jussieu,* Ann. Mus. Hist. Nat. Paris 18: 1. 1811.
T.: *Lobelia* Linnaeus [*L. cardinalis* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 184. 1929]
B.H. 2: 542. 1876. — *Campanulaceae* tribus *Lobelieae.*
E.P. 4 (5): 63. 1889 (Schönland). — *Campanulaceae* subfam. *Lobelioideae.*
Hutch. (1): 477. 1959. — *Lobeliaceae.*

Loganiaceae *Martius,* Nov. Gen. et Sp. 2: 133. 1827 (*'Loganieae'*).
T.: *Logania* R. Brown, nom. cons. [*L. albiflora* (Andrews) Druce; I.C.B.N. 263. 1956]
B.H. 2: 786. 1876. — *Loganiaceae,* p.p.
E.P. 4 (2): 19. 1892 (Solereder). — *Loganiaceae* subfam. *Loganioideae,* p.p.
Hutch. (1): 372. 1959. — *Loganiaceae.*

Loranthaceae *A. L. de Jussieu,* Ann. Mus. Hist. Nat. Paris 12: 292. 1808 ('*Lorantheae*').
T.: *Loranthus* Linnaeus (1762), nom. cons. [*L. scurrula* Linnaeus; I.C.B.N. 235. 1956]
B.H. 3: 205. 1880. — *Loranthaceae.*
E.P. Ed. 2. 16b: 98. 1935 (Engler † et K. Krause). — *Loranthaceae.*
Hutch. (1): 337. 1959. — *Loranthaceae.*

Lowiaceae *Ridley,* Fl. Malay Penins. 4: 291. 1924.
T.: *Lowia* Scortechini [*L. longiflora* Scortechini]
E.P. Ed. 2. 15a: 541. 1930 (Winkler). — *Musaceae* subfam. *Lowioideae.*
Hutch. (2): 582. 1959. — *Lowiaceae.*
The genus *Lowia* is commonly regarded as a synonym of *Orchidantha* N. E. Brown (type: *O. borneensis* N. E. Brown), but Schumann maintained both genera (see Engler, Pflanzenr. Heft 1. *Musaceae* subfam. *Lowioideae,* 40. 1900). The name of the type species under *Orchidantha* is *O. longiflora* (Scortechini) Ridley.
Ridley first used the name *Lowiaceae* in 1893 (Trans. Linn. Soc. London, Ser. 2. Bot. 3: 383) when he described the genus *Protamomum* (now also regarded as a synonym of *Orchidantha* N. E. Brown), but he gave no family definition at that time.

Lythraceae *Jaume St.-Hilaire,* Expos. Fam. 2: 175. 1805 ('*Lythrariae*').
T.: *Lythrum* Linnaeus [*L. hyssopifolia* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 157. 1929]
B.H. 1: 733. 1867. — *Lythrarieae,* p.p.
E.P. 3 (7): 1. 1892 (Koehne). — *Lythraceae.*
Hutch. (1): 445. 1959. — *Lythraceae.*

Magnoliaceae *A. L. de Jussieu,* Gen. Pl. 280. 1789 ('*Magnoliae*').
T.: *Magnolia* Linnaeus [*M. virginiana* Linnaeus]
B.H. 1: 16. 1862. — *Magnoliaceae* tribus *Magnolieae.*
E.P. 3 (2): 12. 1888 (Prantl). — *Magnoliaceae* tribus *Magnolieae.*
Hutch. (1): 123. 1959. — *Magnoliaceae* (key to genera by J. E. Dandy).

Malesherbiaceae *D. Don,* Edinburgh New Phil. Journ. 2: 321. 1827.
T.: *Malesherbia* Ruiz et Pavon [*M. thyrsiflora* Ruiz et Pavon]
B.H. 1: 808. 1867. — *Passifloreae* tribus *Malesherbieae.*
E.P. Ed. 2. 21: 467. 1925 (Harms). — *Malesherbiaceae.*
Hutch. (1): 240. 1959. — *Malesherbiaceae.*

Malpighiaceae *A. L. de Jussieu,* Gen. Pl. 252. 1789 ('*Malpighiae*').
T.: *Malpighia* Linnaeus [*M. glabra* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 155. 1929]
B.H. 1: 247. 1862. — *Malpighiaceae.*
E.P. 3 (4): 41. 1890 (Niedenzu). — *Malpighiaceae.*
Hutch. (1): 258. 1959. — *Malpighiaceae.*

Malvaceae *A. L. de Jussieu,* Gen. Pl. 271. 1789.
T.: *Malva* Linnaeus [*M. sylvestris* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 173. 1929]
B.H. 1: 195. 1862. — *Malvaceae* p.p., excl. tribus (vel subordo) *Bombaceae.*
E.P. 3 (6): 30. 1890 (Schumann). — *Malvaceae.*
Hutch. (1): 254. 1959. — *Malvaceae.*

Marantaceae *Koch,* Berliner Gartenzeit. 25: 141. 1857.
T.: *Maranta* Linnaeus [*M. arundinacea* Linnaeus]
B.H. 3: 638. 1883. — *Scitamineae* tribus *Maranteae.*
E.P. Ed. 2. 15a: 654. 1930 (Loesener). — *Marantaceae.*
Hutch. (2): 588. 1959. — *Marantaceae.*
Marantaceae, as originally validly published by Lindley (1830), included *Cannaceae.* The two families were separated and defined by Koch (1857).

Marcgraviaceae *Choisy* in A. P. Decandolle, Prodr. 1: 565. 1824.
T.: *Marcgravia* Linnaeus [*M. umbellata* Linnaeus]
B.H. 1: 178. 1862. — *Ternstroemiaceae* tribus *Marcgravieae.*
E.P. Ed. 2. 21: 94. 1925 (Gilg et Werdermann). — *Marcgraviaceae.*
Hutch. (1): 278. 1959. — *Marcgraviaceae.*

Martyniaceae *Stapf* in Engler et Prantl, Nat. Pflanzenfam. 4 (3b): 265. *fig. 102.* 1895.
T.: *Martynia* Linnaeus [*M. annua* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 167. 1929]
B.H. 2: 1054. 1876. — *Pedalineae* tribus *Martynieae.*
E.P. 4 (3b): 265. 1895 (Stapf). — *Martyniaceae.*
Hutch. (1): 392. 1959. — *Martyniaceae.*

Mayacaceae *Kunth*, Phys. Abhandl. K. Akad. Wiss. Berlin 1840: 93. 1842 ('*Mayaceae*').
T.: *Mayaca* Aublet [*M. fluviatilis* Aublet]
B.H. 3: 843. 1883. — *Mayaceae.*
E.P. Ed. 2. 15a: 33. 1930 (Pilger). — *Mayacaceae.*
Hutch. (2): 568. 1959. — *Mayacaceae.*

Medusagynaceae *Engler et Gilg*, Syll. Pflanzenfam. ed. 9-10. 280. 1924.
T.: *Medusagyne* J. G. Baker [*M. oppositifolia* J. G. Baker]
E.P. Ed. 2. 21: 50. 1925 (Engler et Melchior). — *Medusagynaceae.*
Hutch. (1): 280. 1959. — *Medusagynaceae.*
J. G. Baker (Fl. Maurit. and Seych. 16. 1877), referred *Medusagyne* to *Ternstroemiaceae* (*Theaceae* of this list).

Medusandraceae *Brenan*, Kew Bull. 1952: 228. *fig. 1-2.* 1952.
T.: *Medusandra* Brenan [*M. richardsiana* Brenan]
E.P. Ed. 2. 21: 413. 1925 (Gilg). — *Flacourtiaceae* tribus *Paropsieae*, p.p.
Hutch. (1): 335. 1959. — *Medusandraceae.*
Brenan later (Kew Bull. 1953: 507. 1954) referred *Soyauxia* Oliver to this family; Hutchinson did not agree, and returned the genus to *Passifloraceae*, where it was originally placed by Oliver (Hooker, Ic. Pl. 14: sub *t. 1393.* 1882). Gilg (1925) placed *Soyauxia* in the *Flacourtiaceae.*

Melanthiaceae *R. Brown*, Prodr. 272. 1810 ('*Melanthaceae*').
T.: *Melanthium* Linnaeus [*M. virginicum* Linnaeus; vide Britton et Brown, Ill. Fl. ed. 2. 1: 493. 1913]
B.H. 3: 762. 1883. — *Liliaceae* tribus *Veratreae.*
E.P. Ed. 2. 15a: 260. 1930 (K. Krause). — *Liliaceae* tribus *Veratreae.*
Hutch. (2): 608. 1959. — *Liliaceae* tribus *Veratreae.*

Melastomataceae *A. L. de Jussieu*, Gen. Pl. 328. 1789 ('*Melastomae*').
T.: *Melastoma* Linnaeus [*M. malabathrica* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 153. 1929]
B.H. 1: 725. 1867. — *Melastomaceae.*
E.P. 3 (7): 130. 1893 (Krasser). — *Melastomataceae.*
Hutch. (1): 308. 1959. — *Melastomataceae.*

Meliaceae *A. L. de Jussieu*, Gen. Pl. 263. 1789 ('*Meliae*').
T.: *Melia* Linnaeus [*M. azedarach* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 153. 1929]
B.H. 1: 327. 1862. — *Meliaceae.*
E.P. Ed. 2. 19b (1): 1. 1940 (Harms). — *Meliaceae.*
Hutch. (1): 356. 1959. — *Meliaceae.*

Melianthaceae *Link*, Handb. 2: 322. 1831 ('*Meliantheae*').
T.: *Melianthus* Linnaeus [*M. major* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 170. 1929]
B.H. 1: 392. 1862. — *Sapindaceae* subordo *Meliantheae.*
E.P. 3 (5): 374. 1895 (Gürke). — *Melianthaceae* tribus *Meliantheae.*
Hutch. (1): 359. 1959. — *Melianthaceae.*

Menispermaceae *A. L. de Jussieu*, Gen. Pl. 284. 1789 ('*Menisperma*').
T.: *Menispermum* Linnaeus [*M. canadense* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 148. 1929]
B.H. 1: 30. 1862. — *Menispermaceae.*
E.P. 3 (2): 78. 1888 (Prantl). — *Menispermaceae.*
Hutch. (1): 410. 1959. — *Menispermaceae.*

Menyanthaceae *Dumortier*, Anal. Fam. Pl. 20, 25. 1829 ('*Menyanthideae*').
T.: *Menyanthes* Linnaeus [*M. trifoliata* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 129. 1929]
B.H. 2: 803. 1876. — *Gentianeae* tribus *Menyantheae.*
E.P. 4 (2): 105. 1895 (Gilg). — *Gentianaceae* subfam. *Menyanthoideae.*
Hutch. (1): 451. 1959. — *Menyanthaceae.*

Mimosaceae *R. Brown* in Flinders, Voy. Terra Austr. 2: 551. 1814 ('*Mimoseae*').
T.: *Mimosa* Linnaeus [*M. pudica* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 162. 1929]
B.H. 1: 462. 1865. — *Leguminosae* subordo *Mimoseae.*
E.P. 3 (3): 99. 1891-2 (Taubert). — *Leguminosae* subfam. *Mimosoideae.*
Hutch. (1): 154. 1959. — *Mimosaceae.*

Molluginaceae *Wight*, Ill. Indian Bot. 2: 42. 1850 ('*Mollugineae*').
T.: *Mollugo* Linnaeus [*M. verticillata* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 122. 1929]
B.H. 1: 853. 1867. — *Ficoideae* tribus *Molluginеae.*
E.P. 3 (1b): 39. 1889 (Pax). — *Aizoaceae* subfam. *Molluginoideae.* — Ed. 2. 16c: 226. 1934 (Heimerl). — *Aizoaceae* tribus *Molluginеae.*
Hutch. (1): 428. 1959. — *Molluginaceae.*

(to be continued)

INTERNATIONAL ASSOCIATION FOR PLANT TAXONOMY

ELECTION COUNCIL

Report of the Scrutiny Committee on the Postal Ballot for the Election of a new Executive Committee and Council of the Association.

Valid votes were cast as follows:

For *President:*

W. Robyns	386	Elected
A. C. Smith	71	
J. Rousseau	56	

For *Vice-President:*

A. C. Smith	369	Elected
G. Taylor	86	
C. Baehni	47	

For *Administrator of Finances:*

G. Taylor	376	Elected
R. C. Rollins	104	
R. A. Howard	23	

For *Secretary:*

J. Lanjouw	494	Elected
F. A. Stafleu	21	

For *Treasurer:*

F. A. Stafleu	459	Elected
C. Baehni	19	
Joséphine T. Koster	18	

For *Members of Council:*

C. Baehni	261 + 66	
transferred =	327	Elected
S. T. Blake	317	Elected
J. Rousseau	249 + 56	
transferred =	305	Elected
H. Hara	287	Elected
R. Florin	285	Elected
R. E. G. Pichi-Sermolli	256	Elected
R. C. Rollins	147 + 104	
transferred =	251	Elected
B. Schischkin	242	Elected
K. Rechinger	235	Elected
H. Melchior	214	Elected
J. E. Dandy	187	
C. G. G. J. van Steenis	181	
K. Faegri	176	
C. E. Hubbard	158	
G. H. M. Lawrence	157	
A. L. Cabrera	138	
W. Rothmaler	134	
L. R. Parodi	133	
W. C. Steere	133	
F. R. Fosberg	123	
A. Burkart	121	
A. R. Ponce de León	121	
L. Constance	110	
H. W. Rickett	108	
M. A. Donk	102	
R. McVaugh	77	
G. Taylor	55	
W. Robyns	49	
A. C. Smith	26	

In addition three ballot papers had a vote for H. Merxmüller as a Member of Council inserted in manuscript.

When forwarding the ballotting papers, the Treasurer drew the attention of the Committee to the statement on the ballotting form "The officers of the Society are automatically members of the Council. Therefore, if you vote for a particular candidate for an office, it is not necessary to vote for him again as a Council member," and made the following suggestion to the Committee: "when fixing the total amount of votes for the council members it is necessary to add the two or three numbers of votes for one person given to him in various offices." In the view of the Committee, this was the correct action to take, and it has been done for those not elected to posts on the Executive Committee, their votes for such posts being noted as "transferred". The only effect of this is to cause R. C. Rollins to be elected as a Member of Council, and not J. E. Dandy. The Committee considers, however, that neither the Constitution nor the Ballotting Form indicates clearly whether or not such a transfer should be made, and recommends that the position be formally clarified before the next election.

The Committee also wishes to point out that it is not clear whether the last clause of Article 6 of the Constitution, limiting the numbers on the Council from any one country, refers to the whole Council or only to the ten ordinary members, and recommends that the article be amended to clarify this point. The results of the present election are not affected by either interpretation.

Signed

K. L. Alvin
J. Lewis
R. Ross
Scrutiny Committee

I.A.P.T. ACCOUNTS 1954 - 1958

RECEIPTS	1954	1955	1956	1957	1958
Balances	15.702.81	11.052.33	21.082.93	29.420.23	32.368.08
Fees	11.643.89	17.639.61	15.950.87	19.424.40	19.199.69
Ind. Herb.	1.418.29	725.89	1.780.45	1.923.15	3.278.31
Code	2.582.87	280.18	209.74	10.627.60	6.374.62
Regn. Veg.	1.244.31	100.78	1.332.48	1.131.53	2.897.37
I.N.G.	13.80	767.65	5.437.96	10.362.06	14.663.56
Taxon	154.79	475.11	1.470.94	1.710.05	1.602.86
I.U.B.S.	8.053.47	9.221.74	5.201.24	8.525.70	10.930.—
NSF/Rock.	—.—	3.800.—	17.977.74	—.—	46.740.—
Interest	34.01	57.44	168.07	445.61	1.134.64
Technical	1.720.07	670.40	867.44	506.50	1.244.16
Bonds	—.—	—.—	—.—	—.—	4.696.70
	42.568.31	44.791.13	71.479.86	84.076.83	145.129.99

EXPENDITURE	1954	1955	1956	1957	1958
Taxon	7.407.07	6.297.92	7.753.20	9.114.88	10.875.13
I.N.G.	137.44	3.738.03	3.878.97	11.617.58	14.403.87
Ind. Herb.	4.080.93	—.—	4.452.25	3.611.33	—.—
Code	—.—	—.—	8.548.76	—.—	—.—
Regn. Veg.	5.543.85	118.41	2.875.—	—.—	7.365.58
Directory	—.—	—.—	3.537.55	4.961.54	9.456.—
Ind. Musc.	—.—	—.—	—.—	—.—	8.000.—
Congress	6.609.16	5.167.—	—.—	—.—	—.—
Committees	66.14	152.85	287.38	—.—	—.—
Bureau	5.932.81	6.996.87	9.345.45	10.908.35	10.110.09
I.U.B.S.	—.—	—.—	—.—	388.55	1.289.18
Bonds	—.—	—.—	—.—	10.492.33	11.838.93
Techn./Div.	1.738.58	1.237.12	1.381.07	614.19	2.842.25
Balances	11.052.33	21.082.93	29.420.23	32.368.08	63.790.51
NSF	—.—	—.—	—.—	—.—	4.940.—
	42.568.31	44.791.13	71.479.86	84.076.83	145.129.99

I.A.P.T. BALANCES 9 JAN. 1954 AND 1 JAN. 1959

CREDIT	1954	1959	DEBET	1954	1959
Savings	—.—	47.552.62	Dubious debtors	700.—	1.000.—
Bonds	—.—	18.000.—	I.U.B.S. terminology	—.—	652.—
Cash	15.702.81	16.237.89	Index Muscorum grant	—.—	32.000.—
Inventory	400.—	1.—	Equipment-fund	1.000.—	3.000.—
Claims	5.902.58	10.588.84	Publications	8.500.—	36.000.—
Stocks	900.—	20.175.—	General reserve	12.705.39	39.903.35
	22.905.39	112.555.35		22.905.39	112.555.35

Utrecht, 1 June 1959

J. Rousseau, Administrator of Finances

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WILLIAM ADAMS DAYTON

1885 - 1958

Elbert L. Little, Jr. (Washington, D. C.)

William Adams Dayton, American forest ecologist, dendrologist, and authority on range plants and English plant names, died suddenly from a heart attack in Arlington, Virginia, on October 20, 1958, at the age of 72. For nearly a half century he had been active in range forage investigations and various other research projects with the Forest Service of the United States Department of Agriculture at Washington, D.C.

Born in New York City, New York, on December 14, 1885, he was the son of Dr. William Adams Dayton, a physician, and Emma Sampson Dayton. His maternal grandfather was Dr. George Whitefield Sampson, president of Columbia College, now George Washington University. His childhood home was Tarrytown, N.Y., where at an early age he developed an interest in trees. Then he attended Williams College, receiving the Bachelor of Arts degree in 1905 and Master of Arts in 1908. From 1906 to 1910 he worked in the United States Post Office Department at Washington, D.C.

His career with the Forest Service started in 1910 and continued beyond his retirement 45 years later to the day of his death. Beginning as a plant ecologist with Arthur W. Sampson, he pioneered in range research on the national forests and a year later was placed in charge of range forage investigations. The first few years he did field work in Arizona, California, and Oregon and obtained basic data for livestock grazing.

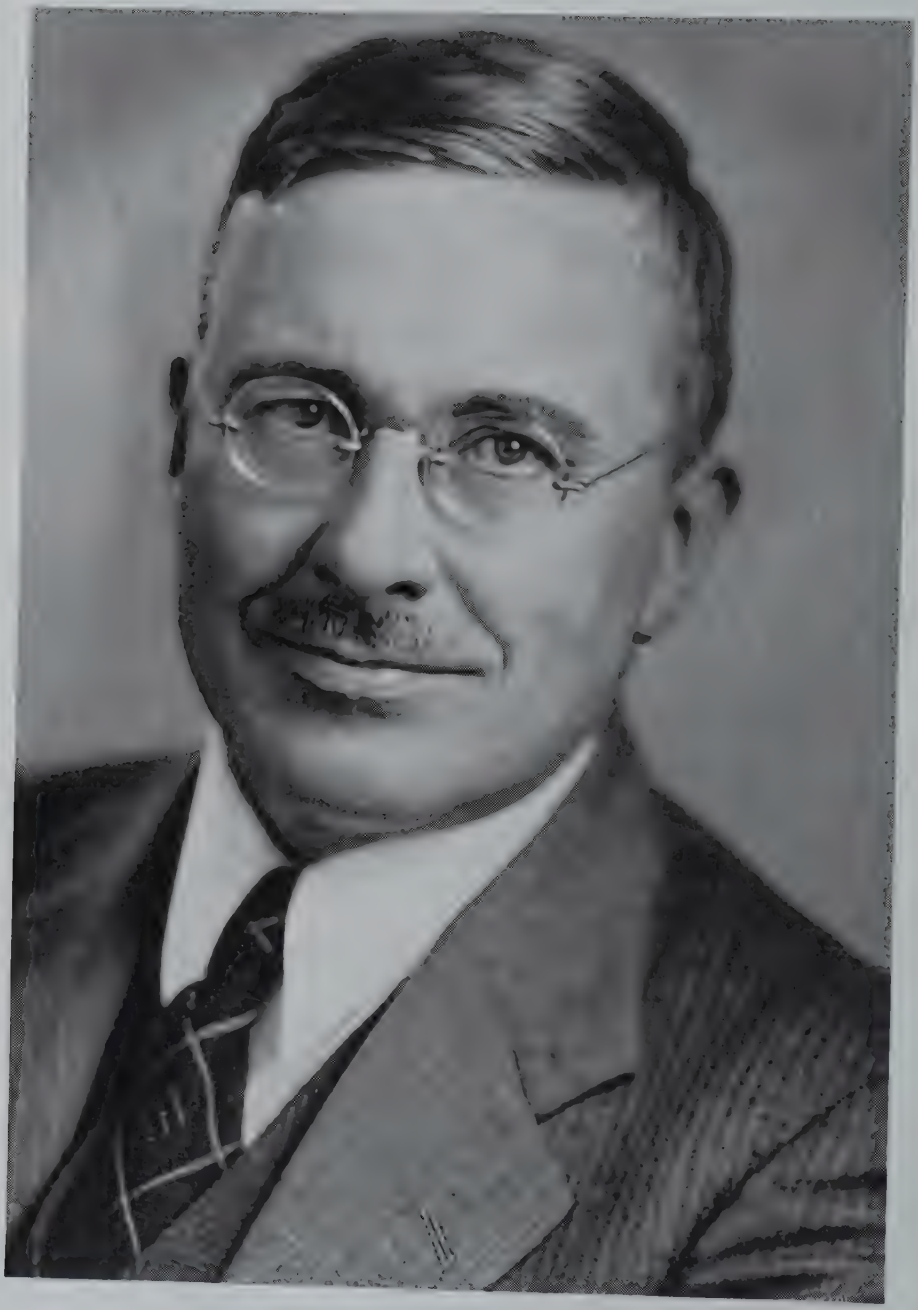
The Forest Service Herbarium, founded by him in 1910 in Washington, D.C., where he was transferred in 1914, is a monument to his industry. Under his active supervision for many years, this has become the largest collection of range plants in the country, now more than 120,000 specimens mostly carefully annotated with forage data. This herbarium is particularly rich in material from the western national forests including the less accessible mountainous regions and has contributed many extensions of geographical distribution.

In 1942, when the Forest Service resumed research in dendrology after a lapse of some years, Mr. Dayton was selected to be chief of the new Division of Dendrology and Range Forage Investigations. Thereafter he devoted more attention to his interest in trees. Upon his retirement in 1955 he remained active as a collaborator.

His ecological field work was conducted in various parts of the country from the Southeast and Northeast as well as the West. Along with forage plants he studied plants poisonous to livestock. In 1943 he served as dendrologist with a forest survey party in Costa Rica.

Mr. Dayton wrote a few books and more than 150 scientific articles, bulletins, notes, and reviews. "Range Plant Handbook" (1937) was a comprehensive illustrated

COMMONWEALTH MYCOLOGICAL INSTITUTE
30 JUL 1959



William Adams Dayton 1885-1958

reference on western range plants prepared with others under his supervision. "Important Western Browse Plants" (1931) was an outstanding publication on woody range plants. Important bulletins were "Artificial Reseeding on Western Mountain Range Lands" (with C. L. Forsling, 1931) and "Glossary of Botanical Terms Commonly Used in Range Research" (1931). Shortly before his death he completed a handbook now in press, "Notes on Western Range Forbs."

In dendrology he prepared "United States Tree Books, a Bibliography of Tree Identification" (1952) and "The Forests of Costa Rica" (with others, 1943). He supervised work on the Forest Service "Check List of Native and Naturalized Trees of the United States" (1953) and was largely responsible for the uniform English names in that reference.

He was a leader in the standardization of English plant names, especially of native range plants and forest trees. On plant name committees he worked energetically toward selection of suitable, unambiguous common names and toward uniform usage.

Because of his great interest and earlier contributions, he was invited to represent the United States Department of Agriculture on the editorial committee to revise "Standardized Plant Names." However, the burden of completing this arduous task fell upon him alone. Perhaps his greatest work was "Standardized Plant Names" (with Harlan P. Kelsey, second edition, 1942), a list of about 90,000 approved scientific and common names of plants and products in American commerce or use. For this most comprehensive reference he was awarded the gold medal of the Massachusetts Horticultural Society.

Mr. Dayton's broad interests are revealed by his membership in more than twenty scientific societies. Serving as president or other officer of several and on committees, he gave generously of his time. He was a delegate to the Seventh International Botanical Congress at Stockholm, Sweden, in 1950, and presided as a section chairman at the Sixth International Grassland Congress, State College, Pennsylvania, in 1952.

The Department of Agriculture in 1955 gave him its highest honor, the Distinguished Service Award, "for conducting and providing leadership in carrying out important research on the taxonomy and ecology of grasses, browse plants, trees and related forest and range vegetation."

He was married on August 18, 1918, to Helen Rollins and is survived by her and by three children, William Adams, Elva Samson (Mrs. Merrill F. Aukland), and Orlo Hazen. A sister, Mrs. Elizabeth Dayton Osgood also survives.

A brilliant scholar with a remarkable memory for details, Bill Dayton, as his friends called him, was an encyclopedia of knowledge about plants. He had an excellent command of words and languages, particularly of classical Greek and Latin. This bibliophile assembled a valuable personal library on plant sciences which he so graciously shared with others.

His associates and correspondents sought his assistance widely, whether the identification of a small plant specimen or the answer to some obscure question. His pleasant personality, quiet unassuming manner, patience, and humor helped to make many friends. He was an energetic and meticulous worker and was always willing to help others. Maintaining a high standard of perfection in his own work, he found errors easily and cited them in his reviews. Though some may not follow his compounding of English plant names, his influence toward uniformity of plant names in the United States will be lasting.

CAPITALS AND PRINCIPLES

R. Ross (London)

In the latest number of *Taxon* both Pinto da Silva (Taxon 8: 117. 1959) and Pesante (tom. cit.: 131) state that the capitalisation of initial letters is a matter of grammar, and not of typography as stated in Art. 73, Note 1. In that Note, however, the antithesis is with spelling, and there can be no question that, e.g., "linnaei", "Linnaei", and "LINNAEI" do not vary in spelling but only in typography. It is true that in modern languages using the latin alphabet the use, in minuscule texts, of majuscules for the initial letters of proper names, the first words of sentences, etc., is regulated by precepts of the same general nature and with the same force as those which deal with accidence and syntax. In Latin itself, however, such precepts have much less authority, for there is no evidence that the majuscule was regularly employed in this way in minuscule texts before the second half of the first millenium of our era, i.e. many centuries after classical times.

There is, however, a more general reason for rejecting an appeal to grammatical authority. A language is no more than a tool for the expression of meaning, and it works by the attaching of a particular significance to a particular symbol or series of symbols (either sounds or letters) by a mutually agreed convention. There is therefore no reason why the conventions should not be altered by mutual agreement of the users of the language, if they consider this desirable. For ordinary words, the conventions are established and altered through usage by tacit agreement, recorded and to some extent stabilised in dictionaries. The vocabulary of botanical Latin, and especially the nomenclature of plant taxa, because it consists almost entirely of words for specially defined concepts and categories, has to be regulated explicitly, but those competent to regulate it, viz.: the International Botanical Congresses, may regulate it as they please without violating any absolutes. It is greatly to be hoped that the majority will continue to think it desirable that specific epithets should all be written with a small initial letter.

The basis of the argument in the previous paragraph applies not only to questions of grammar, spelling, and typography, but throughout botanical nomenclature, being one of its two principles; these, defined in single words, are firstly expediency and secondly independence. The first follows from the fact indicated above that botanical names, like all words, are no more than symbols with which meaning is associated by convention; the greater the ease and precision with which symbol and meaning are associated, the fitter for its purpose is the system of conventions. The second follows from the fact that botanical nomenclature deals with the names of taxa, and, if it is properly to subserve the science of plant taxonomy, must not limit the expression of any taxonomic conclusions to which the facts may lead. It is important to remember that the Principles which form Division I of the Code are not the basic principles of nomenclature — these are indicated in the first paragraph of the Preamble — but only statements in summary form of the system currently found desirable, which is set out in detail in Division II. There is no reason stemming from nomenclatural principles why the binomial system should not be completely scrapped if it were decided that a different system would be simpler and clearer. Equally, any proposals to amend the current Code must be judged not by whether they are in accordance with the principles in Division I but by whether they will make it easier for authors and readers to associate a taxonomic category and a plant name. Variance from the principles of the Code is not an argument against an amendment but only a warning that an exception is being made and that care is needed to keep the Code self-consistent. The type method, priority, grammatical correctness — these are not the absolutes of botanical nomenclature; clarity and ease in the use of names are.

NOMINA FAMILIARUM CONSERVANDA PROPOSITA *

A. A. Bullock (Kew)

Monimiaceae *A. L. de Jussieu*, Ann. Mus. Hist. Nat. Paris 14: 133. 1809 ('*Monimieae*').
T.: *Monimia* Thouars [*M. rotundifolia* Thouars; vide Bullock, Kew Bull. 1959: ined.]
B.H. 3: 137. 1880. — *Monimiaceae.*
E.P. 3 (2): 94. 1888-9 (Pax). — *Monimiaceae.*
Hutch. (1): 136. 1959. — *Monimiaceae.*

Monotropaceae *Nuttall*, Gen. N. Amer. Pl. 1: 272. 1818 ('*Monotropeae*').
T.: *Monotropa* Linnaeus [*M. uniflora* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 153. 1929]
B.H. 2: 604. 1876. — *Monotropeae.*
E.P. 4 (1): 9. 1889 (Drude). — *Pirolaceae* subfam. *Monotropoideae.*
Hutch. (1): 294. 1959. — *Monotropaceae.*
In the event of union of this family with *Pyrolaceae*, the latter name should be conserved.

Montiniaceae *Nakai*, Ord. Fam. etc. App. 243. 1943.
T.: *Montinia* Thunberg [*M. caryophyllacea* Thunberg]
B.H. 1: 794. 1867. — *Onagrarieae*, genus anomalum.
E.P. Ed. 2. 18a: 223. 1930 (Engler). — *Saxifragaceae* subfam. *Montinioideae.*
Hutch. (1): 166. 1959. — *Escalloniaceae*, p.p.
See also Milne-Redhead (Hooker, Ic. Pl. 36: sub *tt. 3541-3544.* 1956), who gave a long discussion and bibliography.

Moraceae *Link*, Handb. 2: 444. 1831 ('*Moriformes*').
T.: *Morus* Linnaeus [*M. nigra* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 188. 1929]
B.H. 3: 344. 1880. — *Urticaceae* tribus *Moreae.*
E.P. 3 (1): 66. 1888 (Engler). — *Moraceae*, excl. subfam. *Cannaboideae.*
Hutch. (1): 201. 1959. — *Moraceae.*

Moringaceae *R. Brown* in Denham et Clapperton, Trav. N. and C. Afr. 238. 1826 ('*Moringeae*').
T.: *Moringa* Adanson [*M. oleifera* Lamarck; vide Bullock, Kew Bull. 1959: ined.]
B.H. 1: 429. 1862. — *Moringeae.*
E.P. Ed. 2. 17b: 693. 1936 (Pax). — *Moringaceae.*
Hutch. (1): 225. 1959. — *Moringaceae.*

Musaceae *A. L. de Jussieu*, Gen. Pl. 61. 1789 ('*Musae*').
T.: *Musa* Linnaeus [*M. paradisiaca* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 193. 1929]
B.H. 3: 639. 1883. — *Scitamineae* tribus *Museae*, p.p.
E.P. Ed. 2. 15a: 505. 1930 (Winkler). — *Musaceae* subfam. *Musoideae* (p. 538).
Hutch. (2): 581. 1959. — *Musaceae.*

Myoporaceae *R. Brown*, Prodr. 514. 1810 ('*Myoporinae*').
T.: *Myoporum* G. Forster [*M. laetum* G. Forster; vide Bullock, Kew Bull. 1959: ined.]
B.H. 2: 1123. 1876. *Myoporineae.*
E.P. 4 (3b): 354. 1895 (R. Wettstein). — *Myoporaceae.*
Hutch. (1): 503. 1959. — *Myoporaceae.*

Myricaceae *S. F. Gray*, Nat. Arr. Brit. Pl. 2: 249. 1821 ('*Myricae*').
T.: *Myrica* Linnaeus [*M. gale* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 191. 1929]
B.H. 3: 400. 1880. — *Myricaceae.*
E.P. 3 (1): 26. 1887 (Engler). — *Myricaceae.*
Hutch. (1): 189. 1959. — *Myricaceae.*

Myristicaceae *R. Brown*, Prodr. 399. 1810 ('*Myristiceae*').
T.: *Myristica* Boehmer, nom. cons. [*M. fragrans* Houttuyn; I.C.B.N. 238. 1956]
B.H. 3: 135. 1880. — *Myristicaceae.*
E.P. 3 (2): 40. 1888 (Prantl). — *Myristicaceae.*
Hutch. (1): 142. 1959. — *Myristicaceae.*
See also O. Warburg in Nova Acta Leop.-Carol. 68: (1897).

Myrothamnaceae *Niedenzu* in Engler et Prantl, Nat. Pflanzenfam. 3 (2a): 103. 1891.
T.: *Myrothamnus* Welwitsch [*M. flabellifolia* Welwitsch]
B.H. 1: 1005. 1867. — *Hamamelideae* (addit.).
E.P. 3 (2a): 103. 1891 (Niedenzu). — *Myrothamnaceae.*
Hutch. (1): 181. 1959. — *Myrothamnaceae.*

Myrsinaceae *R. Brown*, Prodr. 352. 1810 ('*Myrsineae*').
T.: *Myrsine* Linnaeus [*M. africana* Linnaeus]

* Continued from p. 181.

B.H. 2: 639. 1876. — *Myrsineae*, excl. tribus *Theophrasteae*.
E.P. 4 (1): 84. 1889 (Pax). — *Myrsinaceae*, excl. subfam. *Theophrastoideae* et *Aegiceratoideae*.
Hutch. (1): 345. 1959. — *Myrsinaceae*.

Myrtaceae *A. L. de Jussieu*, Gen. Pl. 322. 1789 ('*Myrti*').
T.: *Myrtus* Linnaeus [*M. communis* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 158. 1929]
B.H. 1: 690. 1865. — *Myrtaceae*, excl. tribus *Lecythideae*.
E.P. 3 (7): 57. 1893 (Niedenzu). — *Myrtaceae*.
Hutch. (1): 302. 1959. — *Myrtaceae*.

Myzodendraceae *J. G. Agardh*, Theoria Syst. Pl. Fam. Phan. 236. 1858 ('*Myzodendreae*').
T.: *Myzodendron* J. R. et G. Forster [*M. punctulatum* J. R. et G. Forster]
B.H. 3: 229. 1880. — *Santalaceae* tribus *Osyrideae*, p.p.
E.P. Ed. 2. 16b: 92. 1935 (Skottsberg). — *Myzodendraceae*.
Hutch. (1): 339. 1959. — *Myzodendraceae*.

Najadaceae *A. L. de Jussieu*, Gen. Pl. 18. 1789 ('*Naiades*').
T.: *Najas* Linnaeus [*N. marina* Linnaeus]
B.H. 3: 1009. 1883. — *Naiadaceae* tribus *Naiadeae*.
E.P. 2 (1): 214. 1889 (Magnus). — *Najadaceae*.
Hutch. (2): 561. 1959. — *Najadaceae*.

Nandinaceae *Nakai*, Fl. Sylv. Korea. 21: 61. 1936.
T.: *Nandina* Thunberg [*N. domestica* Thunberg]
B.H. 1: 44. 1862. — *Berberideae* tribus *Berbereae*, p.p.
E.P. 3 (2): 75. 1888 (Prantl). — *Berberidaceae*, p.p.
Hutch. (1): 411. 1959. — *Nandinaceae*.

Nartheciaceae *Small*, Manual Southeastern Fl. 287. 1933.
T.: *Narthecium* Hudson, nom. cons. (syn. *Abama* Adanson) [*N. ossifragum* (Linnaeus) Hudson; — I.C.B.N. 225. 1956]
B.H. 3: 760. 1883. — *Liliaceae* tribus *Narthecieae*, p.p.
E.P. Ed. 2. 15a: 254. 1930 (K. Krause). — *Liliaceae* subfam. *Melanthioideae* tribus *Tofieldieae*.
Hutch. (2): 595. 1959. — *Liliaceae* tribus *Narthecieae*.

This is proposed in preference to the earlier *Abaminaceae* (J. G. Agardh, 1858) on account of the conservation of *Narthecium*.

Nectaropetalaceae *Exell et Mendonça*, Bol. Soc. Brot. ser. 2. 25: 105. 1951.
T.: *Nectaropetalum* Engler [*N. kaessneri* Engler]
E.P. Ed. 2. 19a: 120. 1931 (Winkler). — *Linaceae* subfam. *Linoideae* tribus *Nectaropetaleae*.
Hutch. (1): 265. 1959. — *Erythroxylaceae*, p.p.

Nelumbonaceae *Dumortier*, Anal. Fam. Pl. 53. 1829 ('*Nelumboneae*').
T.: *Nelumbo* Adanson [*N. speciosa* Willdenow (*Nymphaea nelumbo* Linnaeus)]
B.H. 1: 46. 1862. — *Nymphaeaceae* subordo *Nelumboneae*.
E.P. 3 (2): 4. 1888 (Caspary). — *Nymphaeaceae* subfam. *Nelumbonoideae*.
Hutch. (1): 403. 1959. — *Nymphaeaceae*, p.p.

Nepenthaceae *Dumortier*, Anal. Fam. Pl. 15. 1829 ('*Nepenthideae*').
T.: *Nepenthes* Linnaeus [*N. distillatoria* Linnaeus]
B.H. 3: 115. 1880. — *Nepenthaceae*.
E.P. Ed. 2. 17b: 728. 1936 (Harms). — *Nepenthaceae*.
Hutch. (1): 417. 1959. — *Nepenthaceae*.

Nolanaceae *Dumortier*, Anal. Fam. Pl. 20. 1829.
T.: *Nolana* Linnaeus [*N. prostrata* Linnaeus]
B.H. 2: 867. 1876. — *Convolvulaceae* tribus *Nolaneae*.
E.P. 4 (3b): 1. 1891 (R. Wettstein). — *Nolanaceae*.
Hutch. (1): 486. 1959. — *Nolanaceae*.

Nyctaginaceae *A. L. de Jussieu*, Gen. Pl. 90. 1789 ('*Nyctagines*').
T.: *Mirabilis* Linnaeus (syn. *Nyctago* A. L. de Jussieu) [*M. jalapa* Linnaeus]
B.H. 3: 1. 1880. — *Nyctagineae*.
E.P. Ed. 2. 16c: 86. 1934 (Heimerl). — *Nyctaginaceae*.
Hutch. (1): 216. 1959. — *Nyctaginaceae*.

Nymphaeaceae *Salisbury* in Koenig et Sims, Ann. Bot. 2: 70. 1805 ('*Nymphaceae*').
T.: *Nymphaea* Linnaeus, nom. cons. [*N. alba* Linnaeus; — I.C.B.N. 237. 1956]
B.H. 1: 45. 1862. — *Nymphaeaceae*, excl. tribus *Cabombeae* et subordo *Nelumboneae*.
E.P. 3 (2): 1. 1888 (Caspary). — *Nymphaeaceae*, excl. subfam. *Cabomboideae* et subfam. *Nelumbonoideae*.

Hutch. (1): 403. 1959. — *Nymphaeaceae* (excl. *Nelumbo*).

See also *Nelumbonaceae* and *Cabombaceae*.

Nyssaceae *A. de Jussieu,* Dict. Sc. Nat. 35: 267. 1825 (*'Nysseae'*).

T.: *Nyssa* Linnaeus [*N. aquatica* Linnaeus]
B.H. 1: 952. 1867. — *Cornaceae,* p.p.
E.P. 3 (8): 255, 257. 1898 (Harms). — *Cornaceae* subfam. *Nyssoideae.*
Hutch. (1): 175. 1959. — *Nyssaceae* (excl. *Davidia*).

The two subfamilies *Nyssoideae* and *Davidioideae* were united and raised to family rank as *Nyssaceae* by Engler, Syll. Pflanzenfam. ed. 6. 179 (1909). The family was monographed by Wangerin in Engler, Pflanzenr. in 1910, but some recent authors have regarded *Davidiaceae* as distinct and the family is included in this list.

Ochnaceae *A. P. Decandolle,* Ann. Mus. Hist. Nat. Paris 17: 410. 1811.

T.: *Ochna* Linnaeus [*O. jabotapita* Linnaeus]
B.H. 1: 316. 1862. — *Ochnaceae.*
E.P. Ed. 2. 21: 53. 1925 (Gilg). — *Ochnaceae.*
Hutch. (1): 282. 1959. — *Ochnaceae.*

See also E.P. Nachtr. 3. 219. 1907 (Engler).

Octoknemaceae *Engler,* Bot. Jahrb. 43: 177. 1909 [*van Tieghem,* Journ. de Bot. 19: 45. 1905 (*'Octocnémacées'*)].

T.: *Octoknema* Pierre [*O. klaineana* Pierre]
E.P. Nachtr. 4: 75. 1914 (Pilger et K. Krause). — *Octoknemataceae.* — Ed. 2. 16b: 42. 1935 (Harms). — *Octoknemaceae.*
Hutch. (1): 331. 1959. — *Octoknemaceae.*

Olacaceae *Mirbel ex A. P. Decandolle,* Prodr. 1: 531. 1824 (*'Olacineae'*) [*Mirbel,* Bull. Soc. Philom. 3: 377. 1813 (*'Olacinées'*)].

T.: *Olax* Linnaeus [*O. zeylanica* Linnaeus]
B.H. 1: 342, 343. 1862. — *Olacineae* tribus *Olaceae.*
E.P. Ed. 2. 16b: 5. 1935 (Sleumer). — *Olacaceae,* p.p.
Hutch. (1): 329. 1959. — *Olacaceae.*

Oleaceae *Hoffmannsegg et Link,* Fl. Port. 1: 386. 1809 (*'Oleinae'*).

T.: *Olea* Linnaeus [*O. europaea* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 115. 1929]
B.H. 2: 672. 1876. — *Oleaceae.*
E.P. 4 (2): 1. 1892 (Knoblauch). — *Oleaceae.*
Hutch. (1): 378. 1959. — *Oleaceae.*

Oliniaceae *Arnott,* Ann. Mag. Nat. Hist. 3: 154. 1839 (*'Olinieae'*).

T.: *Olinia* Thunberg, nom. cons. [*O. cymosa* Thunberg; vide I.C.B.N. 257. 1956]
B.H. 1: 785. 1867. — *Lythrarieae,* genus anomalum.
E.P. 3 (6a): 213. 1894 (Gilg). — *Oliniaceae.*
Hutch. (1): 163. 1959. — *Oliniaceae.*

Onagraceae *A. L. de Jussieu,* Gen. Pl. 317. 1789 (*'Onagrae'*).

T.: *Oenothera* Linnaeus [*O. biennis* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 149. 1929]
B.H. 1: 785. 1867. — *Onagrarieae,* p.p.
E.P. 3 (7): 199. 1893 (Raimann). — *Onagraceae.*
Hutch. (1): 446. 1959. — *Onagraceae.*

In E.P. Nachtr. 3: 249. 1907 (Engler) the family name *Oenotheraceae* was adopted.

Opiliaceae *Valeton,* Crit. Overz. Olacin. 136. 1886.

T.: *Opilia* Roxburg [*O. amentacea* Roxburgh]
B.H. 1: 344. 1862. — *Olacineae* tribus *Opilieae.*
E.P. Ed. 2. 16b: 33. 1935 (Sleumer). — *Opiliaceae.*
Hutch. (1): 330. 1959. — *Opiliaceae.*

Orchidaceae *A. L. de Jussieu,* Gen. Pl. 64. 1789 (*'Orchideae'*).

T.: *Orchis* Linnaeus [*O. militaris* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 184. 1929]
B.H. 3: 460. 1883. — *Orchideae,* excl. tribus *Cypripedieae.*
E.P. 2 (6): 52. 1889 (Pfitzer). — *Orchidaceae* excl. subtribus *Cypripedilinae* et subtribus *Apostasiinae.*
Hutch. (2): 691. 1959. — *Orchidaceae,* excl. tribus *Cypripedieae.*

Orobanchaceae *Ventenat,* Tabl. Regne Vég. 2: 292. 1799 (*'Orobanchoideae'*).

T.: *Orobanche* Linnaeus [*O. major* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 169. 1929]
B.H. 2: 980. 1876. — *Orobanchaceae.*
E.P. 4 (3b): 123. 1893 (Beck von Mannagetta). — *Orobanchaceae.*
Hutch. (1): 492. 1959. — *Orobanchaceae.*

Oxalidaceae *R. Brown* in Tuckey, Narr. Exped. Congo 433. 1818 (*'Oxalideae'*).

T.: *Oxalis* Linnaeus [*O. acetosella* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 156. 1929]

B.H. 1: 270. 1862. — *Geraniaceae* tribus *Oxalideae*, p.p.
E.P. Ed. 2. 19a: 11. 1931 (Knuth). — *Oxalidaceae*, p.p.
Hutch. (1): 497. 1959. — *Oxalidaceae.*

Paeoniaceae *Bartling*, Ord. Nat. Pl. 251. 1830.
T.: *Paeonia* Linnaeus [*P. officinalis* Linnaeus]
B.H. 1: 3. 1862. — *Ranunculaceae* tribus *Paeonieae.*
E.P. 3 (2): 54. 1888 (Prantl). — *Ranunculaceae* tribus *Paeonieae.*
Hutch. (1): 400. 1959. — *Paeoniaceae.*
See also Worsdell in Journ. Bot. 46: 114 (1908), and in Ann. Bot. 22: 663 (1908). Also Corner in Journ. Arnold Arb. 27: 423 (1946).

Palmae *A. L. de Jussieu*, Gen. Pl. 37. 1789. — Nom. alt.; *Arecaceae.*
T.: *Areca* Linnaeus [*A. catechu* Linnaeus]
B.H. 3: 870. 1883. — *Palmae.*
E.P. 2 (3): 1. 1889 (Drude). — *Palmae.*
Hutch. (2): 665. 1959. — *Palmae.*

Pandaceae *Pierre*, Bull. Soc. Linn. Paris (2): 1255. 1896.
T.: *Panda* Pierre [*P. oleosa* Pierre]
E.P. Ed. 2. 19a: 1. 1931 (Mildbraed). — *Pandaceae.*
Hutch. (1): 311. 1959. — *Pandaceae.*
Family status was agreed by Pilger and K. Krause in E.P. Nachtr. 4: 151 (1914).

Pandanaceae *R. Brown*, Prodr. 1: 340. 1810 ('*Pandaneae*').
T.: *Pandanus* Linnaeus f. [*P. odoratissimus* Linnaeus f.]
B.H. 3: 949. 1883. — *Pandaneae.*
E.P. 2 (1): 186. 1889 (Solms Laubach). — *Pandanaceae.*
Hutch. (2): 670. 1959. — *Pandanaceae.*

Papaveraceae *A. L. de Jussieu*, Gen. Pl. 235. 1789.
T.: *Papaver* Linnaeus [*P. somniferum* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 160. 1929]
B.H. 1: 49. 1862. — *Papaveraceae* subordo *Papavereae.*
E.P. Ed. 2. 17b: 5. 1936 (Fedde). — *Papaveraceae*, excl. subfam. *Fumarioideae* et genus *Oceanopapaver.*
Hutch. (1): 422. 1959. — *Papaveraceae.*
The genus *Oceanopapaver* Guillaumin (1932) is of somewhat doubtful affinity and may represent a distinct family. It is referred to *Capparidaceae* by Hutchinson (1959).

Papilionaceae *R. Brown* in Flinders, Voy. Terra Austr. 2: 552. 1814. — Nom. alt.; *Fabaceae.*
T.: *Faba* Miller (syn. *Vicia* Linnaeus, p.p.) [*Faba bona* Medicus; syn. *Vicia faba* Linnaeus]
B.H. 1: 437. 1865. — *Leguminosae* subordo *Papilionaceae.*
E.P. 3 (3): 184. 1892-4 (Taubert). — *Leguminosae* subfam. *Papilionatae.*
Hutch. (1): 155. 1959. — *Papilionaceae.*

Parnassiaceae *S. F. Gray*, Nat. Arr. Brit. Pl. 2: 670. 1821 ('*Parnassieae*').
T.: *Parnassia* Linnaeus [*P. palustris* Linnaeus]
B.H. 1: 639. 1865. — *Saxifrageae* tribus *Saxifrageae*, p.p.
E.P. Ed. 2. 18a: 178. 1930 (Engler). — *Saxifragaceae* subfam. *Parnassioideae.*
Hutch. (1): 465. 1959. — *Parnassiaceae.*

Passifloraceae *A. L. de Jussieu*, Ann. Mus. Hist. Nat. Paris 6: 102. *tt. 37-41.* 1805 ('*Passifloreae*').
T.: *Passiflora* Linnaeus [*P. rubra* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 186. 1929]
B.H. 1: 807. 1867. — *Passifloreae* tribus *Passifloreae* et tribus *Modecceae.*
E.P. Ed. 2. 21: 470. 1925 (Harms). — *Passifloraceae*, p.p.
Hutch. (1): 240. 1959. — *Passifloraceae* (excl. *Soyauxia;* vide *Medusandraceae*).

Pedaliaceae *R. Brown*, Prodr. 1: 519. 1810 ('*Pedalinae*').
T.: *Pedalium* Linnaeus [*P. murex* Linnaeus]
B.H. 2: 1054. 1876. — *Pedalineae*, excl. tribus *Martynieae.*
E.P. 4 (3b): 253. 1895 (Stapf). — *Pedaliaceae.*
Hutch. (1): 389. 1959. — *Pedaliaceae.*

Pellicieraceae *Beauvisage*, Contrib. Étude Anat. Ternstroem. 235, 450. 1920.
T.: *Pelliciera* Planchon et Triana [*P. rhizophoreae* Planchon et Triana]
B.H. 1: 179. 1862. — *Ternstroemiaceae* tribus *Gordonieae.*
E.P. Ed. 2. 21: 154. 1925 (Melchior). — *Theaceae* tribus *Pellicieae.*
Hutch. (1): 275. 1959. — *Pellicieraceae.*

Penaeaceae *Guillemin*, Dict. Class. Hist. Nat. 13: 171. 1828.
T.: *Penaea* Linnaeus [*P. mucronata* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 125. 1929]

B.H. 3: 201. 1880. — *Penaeaceae,* excl. genus anomalum.
E.P. 3 (6a): 208. 1894 (Gilg). — *Penaeaceae.*
Hutch. (1): 214. 1959. — *Penaeaceae.*

Pentadiplandraceae *J. Hutchinson et J. M. Dalziel,* Fl. W. Trop. Afr. 1: 461. *fig. 162.* 1928.
T.: *Pentadiplandra* Baillon [*P. brazzeana* Baillon]
E.P. Ed. 2. 17b: 205. 1936 (Pax et K. Hoffmann). — *Capparidaceae* subfam. *Pentadiplandroideae.*
Hutch. (1): 319. 1959. — *Pentadiplandraceae.*

Pentaphragmataceae *J. G. Agardh,* Theoria Syst. Pl. Fam. Phan. 95. 1858 ('*Pentaphragmeae*').
T.: *Pentaphragma* G. Don [*P. begoniifolium* G. Don]
B.H. 2: 558. 1876. — *Campanulaceae* tribus *Campanuleae,* p.p.
E.P. 4 (5): 60. 1889 (Schönland). — *Campanulaceae* subfam. *Campanuloideae* tribus *Pentaphragmeae.*
Hutch. (1): 476. 1959. — *Campanulaceae,* p.p.
The family was independently described and its position discussed by Airy Shaw in Kew Bull. 1941: 233 (1942). See also Airy Shaw in Fl. Malesiana 4 (1): 517 (1954).

Pentaphylacaceae *Engler* in Engler et Prantl, Nat. Pflanzenfam. Nachtr. 214. 1897.
T.: *Pentaphylax* Gardner et Champion [*P. euryoides* Gardner et Champion]
B.H. 1: 183. 1862. — *Ternstroemiaceae* tribus *Ternstroemieae,* p.p.
E.P. Nachtr. 214. 1897 (Engler). — Ed. 2. 20b: 13. 1942 (Mattfeld). — *Pentaphylacaceae.*
Hutch. (1): 276. 1959. — *Pentaphylacaceae.*
See also van Tieghem, Journ. de Bot. 14: 189-197 (1900).

Peridiscaceae *Kuhlmann,* Arquiv. Serv. Florest. Rio de Janeiro 3 (1): 3. 1950.
T.: *Peridiscus* Bentham [*P. lucidus* Bentham]
B.H. 1: 127. 1862. — *Bixineae* tribus *Flacourtieae,* p.p.
E.P. Ed. 2. 21: 457. 1925 (Gilg). — *Flacourtiaceae,* sub genera incertae sedis.
Hutch. (1): 252. 1959. — *Peridiscaceae.*

Periplocaceae *Schlechter,* Notizbl. Bot. Gart. Berlin 9: 23. 1924.
T.: *Periploca* Linnaeus [*P. graeca* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 136. 1929. — I.N.G. 30/05633]
B.H. 2: 730. 1876. — *Asclepiadeae* subordo *Periploceae.*
E.P. 4 (2): 209. 1895 (Schumann). — *Asclepiadaceae* subfam. *Periplocoideae.*
Hutch. (1): 381. 1959. — *Periplocaceae.*
See also Bullock, Kew Bull. 1956: 503 (1957).

Petermanniaceae *J. Hutchinson,* Fam. Fl. Pl. 2: 113. *fig. 43.* 1934.
T.: *Petermannia* F. von Mueller, nom. cons. [*P. cirrosa* F. von Mueller; vide I.C.B.N. 228. 1956]
B.H. 3: 746. 1883. — *Dioscoreaceae,* p.p.
E.P. Ed. 2. 15a: 462. 1930 (Pax). — *Dioscoreaceae* tribus *Stenomeridae,* p.p.
Hutch. (2): 623. 1959. — *Petermanniaceae.*

Petiveriaceae *C. A. Agardh,* Aphor. Bot. 221. 1825 ('*Petivereae*').
T.: *Petiveria* Linnaeus [*P. alliacea* Linnaeus]
B.H. 3: 82. 1880. — *Phytolaccaceae* tribus *Rivineae,* p.p.
E.P. Ed. 2. 16c: 142. 1934 (Heimerl). — *Phytolaccaceae* tribus *Rivineae,* p.p.
Hutch. (1): 438. 1959. — *Petiveriaceae.*

Petrosaviaceae *J. Hutchinson,* Fam. Fl. Pl. 2: 36. *fig. 5.* 1934.
T.: *Petrosavia* Beccari [*P. stellaris* Beccari]
B.H. 3: 828. 1883. — *Liliaceae* tribus *Narthecieae,* p.p.
E.P. Ed. 2. 15a: 256. 1930 (K. Krause). — *Liliaceae* subfam. *Melanthioideae* tribus *Petrosavieae.*
Hutch. (2): 546. 1959. — *Petrosaviaceae.*
The earliest name for this family is *Miyoshiaceae* Makino, Bot. Mag. Tokyo 17: 144 (1903). Makino's subsequent publication of the names *Protoliriaceae* and *Petrosaviaceae* for the same family was provisional.

Philadelphaceae *D. Don,* Edinburgh New Phil. Journ. 1: 133. 1826 ('*Philadelpheae*').
T.: *Philadelphus* Linnaeus [*P. coronarius* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 158. 1929]
B.H. 1: 642. 1865. — *Saxifrageae* tribus *Hydrangeae,* p.p.
E.P. Ed. 2. 18a: 190. 1930 (Engler). — *Saxifragaceae* subfam. *Hydrangeoideae* tribus *Philadelpheae.*
Hutch. (1): 159. 1959. — *Philadelphaceae.*

Philesiaceae *Dumortier,* Anal. Fam. Pl. 53, 54. 1829 ('*Phylesiaceae*').
T.: *Philesia* Commerson [*P. magellanica* J. F. Gmelin]

B.H. 3: 751. 1883. — *Liliaceae* tribus *Luzuriageae,* p.p.
E.P. Ed. 2. 15a: 381. 1930 (K. Krause). — *Liliaceae* subfam. *Luzuriagoideae,* p.p.
Hutch. (2): 625. 1959. — *Philesiaceae.*

Philydraceae *Link,* Enum. Pl. Berol. Alt. 1: 5. 1821 (*'Philhydrinae'*).
T.: *Philydrum* J. Gaertner [*P. lanuginosum* J. Gaertner]
B.H. 3: 840. 1883. — *Philydraceae.*
E.P. Ed. 2. 15a: 190. 1930 (Pilger). — *Philydraceae.*
Hutch. (2): 683. 1959. — *Philydraceae.*

Phrymaceae *Schauer* in Decandolle, Prodr. 11: 520. 1847.
T.: *Phryma* Linnaeus [*P. leptostachya* Linnaeus]
B.H. 2: 1132. 1876. — *Verbenaceae* tribus *Phrymeae.*
E.P. 4 (3b): 361. 1895 (Briquet). — *Phrymaceae.*
Hutch. (1): 398. 1959. — *Phrymaceae.*

Phytolaccaceae *R. Brown* in Tuckey, Narr. Exped. Congo. 454. 1818 (*'Phytolaceae'*).
T.: *Phytolacca* Linnaeus [*P. americana* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 157. 1929]
B.H. 3: 78. 1880. — *Phytolaccaceae* tribus *Euphytolacceae* et tribus *Rivineae,* p.p.
E.P. Ed. 2. 16c: 135. 1934 (Heimerl). — *Phytolaccaceae,* p.p.
Hutch. (1): 435. 1959. — *Phytolaccaceae.*

Picrodendraceae *Small,* Journ. New York Bot. Gard. 18: 184. 1917.
T.: *Picrodendron* Planchon [*P. arboreum* Planchon]
B.H. 1: 315. 1862. — *Simarubeae* tribus *Picramnieae,* p.p.
E.P. Ed. 2. 19a: 405. 1931 (Engler). — *Picrodendraceae.*
Hutch. (1): 196. 1959. — *Picrodendraceae.*

Piperaceae *Link,* Handb. 1: 290. 1829 (*'Piperitae'*).
T.: *Piper* Linnaeus [*P. nigrum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 117. 1929]
B.H. 3: 125. 1880. — *Piperaceae* tribus *Pipereae.*
E.P. 3 (1): 3. 1887 (Engler). — *Piperaceae.*
Hutch. (1): 419. 1959. — *Piperaceae.*

Pittosporaceae *R. Brown* in Flinders, Voy. Terra Austr. 2: 542. 1814 (*'Pittosporeae'*).
T.: *Pittosporum* J. Gaertner [*P. tenuifolium* J. Gaertner; vide Bullock, Kew Bull. 1959: ined.]
B.H. 1: 130. 1862. — *Pittosporeae.*
E.P. Ed. 2. 18a: 265. 1930 (E. Pritzel). — *Pittosporaceae.*
Hutch. (1): 219. 1959. — *Pittosporaceae.*

Plantaginaceae *A. L. de Jussieu,* Gen. Pl. 89. 1789 (*'Plantagines'*).
T.: *Plantago* Linnaeus [*P. major* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 125. 1929]
B.H. 2: 1223. 1876. — *Plantagineae.*
E.P. 4 (3b): 363. 1895 (Harms et Reiche). — *Plantaginaceae.*
Hutch. (1): 455. 1959. — *Plantaginaceae.*

Platanaceae *Dumortier,* Anal. Fam. Pl. 11, 12. 1829 (*'Plataneae'*).
T.: *Platanus* Linnaeus [*P. orientalis* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 189. 1929]
B.H. 3: 396. 1880. — *Platanaceae.*
E.P. 3 (2a): 137. 1891 (Niedenzu). — *Platanaceae.*
Hutch. (1): 182. 1959. — *Platanaceae.*

Plocospermataceae *J. Hutchinson,* Fam. Fl. Pl. ed. 2 (1): 379. 1959 (*'Plocospermaceae'*).
T.: *Plocosperma* Bentham [*P. buxifolium* Bentham]
B.H. 2: 789. 1876. — *Loganiaceae* tribus *Gelsemieae,* p.p.
E.P. 4 (2): 49. 1895 (Solereder). — *Loganiaceae,* genus anomalum.
Hutch. (1): 379. 1959. — *Plocospermaceae.*

Plumbaginaceae *A. L. de Jussieu,* Gen. Pl. 92. 1789 (*'Plumbagines'*).
T.: *Plumbago* Linnaeus [*P. europaea* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 129. 1929]
B.H. 2: 623. 1876. — *Plumbagineae.*
E.P. 4 (1): 116. 1890 (Pax). — *Plumbaginaceae.*
Hutch. (1): 453. 1959. — *Plumbaginaceae.*

Poaceae *Barnhart,* Bull. Torrey Bot. Club 22: 7. 1895. — Nom. alt.; *Gramineae.*
T.: *Poa* Linnaeus [*P. pratensis* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 120. 1929]
B.H. 3: 1074. 1883. — *Gramineae.*
E.P. 2 (2): 1. 1887 (Hackel). — *Gramineae.*
Hutch. (2): 710. 1959. — *Gramineae.*

Podoaceae *Franchet,* Pl. Delav. 145. *tt.* 32-35. 1889 (*'Podoonaceae'*).
T.: *Dobinea* Buchanan (syn. *Podoon* Baillon) [*D. vulgaris* Buchanan]

B.H. 1: 410. 1862. — *Sapindaceae* subordo *Acerineae*, p.p.
E.P. 3 (5): 177. 1892 (Engler). — *Anacardiaceae* tribus *Dobineeae*.
Hutch. (1): 361. 1959. — *Podoaceae*.
A discussion of the affinities of *Dobinea* and its allies was given by Forman (Kew Bull. 1953: 555-564. *fig. 1-2.* 1954) when he described the remarkable new monotypic genus *Campylopetalum* (*C. siamense* Forman, *l.c.* 555, *cum fig.*).

Podophyllaceae *A. P. Decandolle*, Syst. Nat. 2: 31. 1821 ('*Podophylleae*').
T.: *Podophyllum* Linnaeus [*P. peltatum* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 160. 1929]
B.H. 1: 45. 1862. — *Berberideae* tribus *Berbereae*, p.p.
E.P. 3 (2): 74. 1888 (Prantl). — *Berberidaceae*, p.p.
Hutch. (1): 404. 1959. — *Podophyllaceae*.

Podostemaceae *L. C. Richard* in Humboldt, Bonpland et Kunth, Nov. Gen. et Sp. 1: 246. 1816 ('*Podostemeae*').
T.: *Podostemum* Michaux [*P. ceratophyllum* Michaux]
B.H. 3: 105. 1880. — *Podostemaceae*, excl. tribus *Hydrostachydeae*.
E.P. 3 (2a): 1. 1890 (O. Warming). — *Podostemaceae*, excl. subfam. *Hydrostachyoideae*. — Ed. 2. 18a: 3. 1930 (Engler). — *Podostemonaceae*.
Hutch. (1): 470. 1959. — *Podostemaceae*.

Polemoniaceae *A. L. de Jussieu*, Gen. Pl. 136. 1789 ('*Polemonia*').
T.: *Polemonium* Linnaeus [*P. caeruleum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 130. 1929]
B.H. 2: 820. 1876. — *Polemoniaceae*, excl. *Cobaea*.
E.P. 4 (3a): 40. 1891-3 (A. Peter). — *Polemoniaceae*, excl. tribus *Cobaeeae*.
Hutch. (1): 500. 1959. — *Polemoniaceae*.

Polygalaceae *A. L. de Jussieu*, Ann. Mus. Hist. Nat. Paris 14: 389. 1809 ('*Polygaleae*').
T.: *Polygala* Linnaeus [*P. vulgaris* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 173. 1929]
B.H. 1: 134. 1862. — *Polygaleae*, excl. *Krameria* Loefling.
E.P. 3 (4): 323. 1896 (Chodat). — *Polygalaceae*.
Hutch. (1): 232. 1959. — *Polygalaceae* (excl. *Diclidantheraceae*).

Polygonaceae *A. L. de Jussieu*, Gen. Pl. 82. 1789 ('*Polygoneae*').
T.: *Polygonum* Linnaeus [*P. aviculare* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 151. 1929]
B.H. 3: 88. 1880. — *Polygonaceae*.
E.P. 3 (1a): 1. 1892 (Dammer). — *Polygonaceae*.
Hutch. (1): 431. 1959. — *Polygonaceae*.

Pontederiaceae *Kunth* in Humboldt, Bonpland et Kunth, Nov. Gen. et Sp. 1: 265. 1816 ('*Pontedereae*').
T.: *Pontederia* Linnaeus [*P. cordata* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 144. 1929]
B.H. 3: 836. 1883. — *Pontederiaceae*.
E.P. Ed. 2. 15a: 181. 1930 (O. Schwartz). — *Pontederiaceae*.
Hutch. (2): 616. 1959. — *Pontederiaceae*.

Portulacaceae *A. L. de Jussieu*, Gen. Pl. 312. 1789 ('*Portulaceae*').
T.: *Portulaca* Linnaeus [*P. oleracea* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 157. 1929]
B.H. 1: 155. 1862. — *Portulaceae*.
E.P. Ed. 2. 16c: 234. 1934 (Pax et K. Hoffmann). — *Portulacaceae*.
Hutch. (1): 430. 1959. — *Portulacaceae*.

Posidoniaceae *Lotsy*, Vortr. Bot. Stammesgesch. 3 (1): 658. *fig. 441.* 1911.
T.: *Posidonia* Konig, nom. cons. [*P. caulini* Konig; — I.C.B.N. 221. 1956]
B.H. 3: 1011. 1883. — *Naiadaceae* tribus *Posidonieae*.
E.P. 2 (1): 205. 1889 (Engler). — *Potamogetonaceae* tribus *Posidonieae*.
Hutch. (2): 552. 1959. — *Posidoniaceae*.
Family rank was first suggested by G. B. Cacciamali (Rev. Ital. Sc. Nat. 17: 137-142. 1897) in a paper in which all family names were given an Italianate form.

Potaliaceae *Martius*, Nov. Gen. et Sp. 2: 133. 1827.
T.: *Potalia* Aublet [*P. amara* Aublet]
B.H. 2: 788. 1876. — *Loganiaceae* tribus *Euloganieae* subtribus *Fagraeeae*.
E.P. 4 (2): 41. 1892 (Solereder). — *Loganiaceae* subfam. *Loganioideae* tribus *Fagraeeae*.
Hutch. (1): 371. 1959. — *Potaliaceae*.

Potamogetonaceae *Dumortier*, Anal. Fam. Pl. 59, 61. 1829 ('*Potamogetoneae*').
T.: *Potamogeton* Linnaeus [*P. natans* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 127. 1929]

B.H. 3: 1011. 1883. — *Naiadaceae* tribus *Potameae*, p.p.
E.P. 2 (1): 194. 1889 (Ascherson). — *Potamogetonaceae* tribus *Potamogetoneae*.
Hutch. (2): 556. 1959. — *Potamogetonaceae*.

Primulaceae *Ventenat*, Tabl. Regne Vég. 2: 285. 1799.
T.: *Primula* Linnaeus [*P. veris* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 127. 1929]
B.H. 2: 628. 1876. — *Primulaceae*.
E.P. 4 (1): 98. 1890 (Pax). — *Primulaceae*.
Hutch. (1): 453. 1959. — *Primulaceae*.

Proteaceae *A. L. de Jussieu*, Gen. Pl. 78. 1789 ('*Proteae*').
T.: *Leucadendron* R. Brown, nom. cons. (syn. *Protea* Linnaeus, nom. rejic.) [*L. argenteum* (Linnaeus) R. Brown; — I.C.B.N. 234. 1956]
B.H. 3: 165. 1880. — *Proteaceae*.
E.P. 3 (1): 119. 1888-9 (Engler). — *Proteaceae*.
Hutch. (1): 217. 1959. — *Proteaceae*.

Pterostemonaceae *Small*, N. Amer. Fl. 22: 183. 1905.
T.: *Pterostemon* Schauer [*P. mexicanus* Schauer]
B.H. 1: 615. 1865. — *Rosaceae* tribus *Quillajeae*, p.p.; "genus valde anomalum".
E.P. Ed. 2. 18a: 183. 1930 (Engler). — *Saxifragaceae* subfam. *Pterostemonoideae*.
Hutch. (1): 157. 1959. — *Pterostemonaceae*.

Punicaceae *Horaninow*, Prim. Lin. Syst. Nat. 81. 1834.
T.: *Punica* Linnaeus [*P. granatum* Linnaeus]
B.H. 1: 784. 1867. — *Lythrarieae*, genus anomalum.
E.P. 3 (7): 22. 1892 (Niedenzu). — *Punicaceae*.
Hutch. (1): 306. 1959. — *Punicaceae*.

Pyrolaceae *Lindley*, Introd. Nat. Syst. 184. 1830 (non *Pyroleae* Lindley, 1821).
T.: *Pyrola* Linnaeus [*P. rotundifolia* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 154. 1929]
B.H. 2: 581. 1876. — *Ericaceae* tribus *Pyroleae*.
E.P. 4 (1): 3. 1889 (Drude). — *Pirolaceae* subfam. *Piroloideae*.
Hutch. (1): 289. 1959. — *Pyrolaceae*.

Quiinaceae *Engler* in Martius, Fl. Bras. 12 (1): 476. 1888.
T.: *Quiina* Aublet [*Q. guianensis* Aublet]
B.H. 1: 169. 1862. — *Guttiferae* tribus *Quiineae*.
E.P. Ed. 2. 21: 106. 1925 (Engler). — *Quiinaceae*.
Hutch. (1): 301. 1959. — *Quiinaceae*.

Ranunculaceae *A. L. de Jussieu*, Gen. Pl. 231. 1789.
T.: *Ranunculus* Linnaeus [*R. acer* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 163. 1929]
B.H. 1: 1. 1862. — *Ranunculaceae* p.p., excl. tribus *Helleboreae* et tribus *Paeonieae*.
E.P. 3 (2): 43. 1888 (Prantl). — *Ranunculaceae* p.p., excl. tribus *Helleboreae* et tribus *Paeonieae*.
Hutch. (1): 402. 1959. — *Ranunculaceae*.

Rapateaceae *Dumortier*, Anal. Fam. Pl. 60, 62. 1829.
T.: *Rapatea* Aublet [*R. paludosa* Aublet]
B.H. 3: 857. 1883. — *Rapateaceae*.
E.P. Ed. 2. 15a: 59. 1930 (Pilger). — *Rapateaceae*.
Hutch. (2): 572. 1959. — *Rapateaceae*.

Resedaceae *S. F. Gray*, Nat. Arr. Brit. Pl. 2: 665. 1821.
T.: *Reseda* Linnaeus [*R. lutea* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 157. 1929]
B.H. 1: 110. 1862. — *Resedaceae*.
E.P. Ed. 2. 17b: 659. 1936 (Bolle). — *Resedaceae*.
Hutch. (1): 426. 1959. — *Resedaceae*.

Restionaceae *R. Brown*, Prodr. 1: 243. 1810 ('*Restiaceae*').
T.: *Restio* Rottböll, nom. cons. prop., non Linnaeus [*R. triticeus* Rottböll; vide Bullock, Taxon 8: 107. 1959]
E.P. Ed. 2. 15a: 8. 1930 (Gilg-Benedict). — *Restionaceae*.
Hutch. (2): 700. 1959. — *Restionaceae*.
The generic name *Restio* Linnaeus was published first in November 1767, with one species which is taxonomically identical with *Thamnochortus fruticosus* Bergius, published in September 1767. All authors, however, have maintained "*Restio* L." in a sense excluding the original species, and hence the proposal to conserve the name in the sense which has been current for the past 150 years or more.

Rhamnaceae *A. L. de Jussieu*, Gen. Pl. 376. 1789 ('*Rhamni*').
T.: *Rhamnus* Linnaeus [*R. catharticus* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 133. 1929]

B.H. 1: 371. 1862. — *Rhamneae.*
E.P. Ed. 2. 20d: 7. 1953 (Suessenguth). — *Rhamnaceae.*
Hutch. (1): 343. 1959. — *Rhamnaceae.*

Rhizophoraceae *R. Brown* in Flinders, Voy. Terra Austr. 2: 549. 1814 ('*Rhizophoreae*').
T.: *Rhizophora* Linnaeus [*R. mangle* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 157. 1929]
B.H. 1: 677. 1865. — *Rhizophoreae.*
E.P. 3 (7): 42. 1892-3 (Schimper). — *Rhizophoraceae.*
Hutch. (1): 304. 1959. — *Rhizophoraceae.*

Rhoipteleaceae *Handel-Mazzetti,* Rep. Sp. Nov. 30: 75. *tt. 127-128.* 1932.
T.: *Rhoiptelea* Diels et Handel-Mazzetti [*R. chiliantha* Diels et Handel-Mazzetti]
E.P. Nachtr. 242. 1897 (Engler). — *Scytopetalaceae,* p.p.
Hutch. (1): 194. 1959. — *Rhoipteleaceae.*

Roridulaceae *Engler et Gilg,* Syll. Pflanzenf. ed. 9-10. 226. 1924.
T.: *Roridula* Linnaeus [*R. dentata* Linnaeus]
B.H. 1: 664. 1865. — *Droseraceae,* p.p.
E.P. 3 (2): 272. 1891 (Drude). — *Droseraceae,* p.p. — Ed. 2. 18a: 346. 1930 (Diels). — *Roridulaceae.*
Hutch. (1): 220. 1959. — *Byblidaceae,* p.p.

Rosaceae *A. L. de Jussieu,* Gen. Pl. 334. 1789.
T.: *Rosa* Linnaeus [*R. centifolia* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 159. 1929]
B.H. 1: 600. 1865. — *Rosaceae,* p.p.
E.P. 3 (3): 1. 1888 (Focke). — *Rosaceae,* p.p.
Hutch. (1): 149. 1959. — *Rosaceae,* p.p.
See also *Chrysobalanaceae,* which is frequently referred to *Rosaceae* as a tribe or subfamily.

Roxburghiaceae *Wallich,* Pl. As. Rar. 3: 50. *t. 282.* 1832.
T.: *Roxburghia* Roxburgh [*R. gloriosoides* Roxburgh]
B.H. 3: 746. 1883. — *Roxburghiaceae.*
E.P. Ed. 2. 15a: 224. 1930 (K. Krause). — *Stemonaceae.*
Hutch. (2): 656. 1959. — *Roxburghiaceae.*
Krause (1930) adopted the later and illegitimate name *Stemonaceae* Franchet et Savatier (1879) because the generic name *Stemona* Loureiro (1790; type: *S. tuberosa* Loureiro), antedates *Roxburghia* Roxburgh (1795). *Roxburghia* (a name coined by Banks) and *Stemona* are taxonomic synonyms.

Rubiaceae *A. L. de Jussieu,* Gen. Pl. 196. 1789.
T.: *Rubia* Linnaeus [*R. tinctorum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 124. 1929]
B.H. 2: 7. 1873, et 2: 788. 1876. — *Rubiaceae,* et *Loganiaceae* tribus *Gaertnereae.*
E.P. 4 (4): 1. 1891 (Schumann). — *Rubiaceae.*
Hutch. (1): 386. 1959. — *Rubiaceae.*

Ruppiaceae *J. Hutchinson,* Fam. Fl. Pl. 2: 48. 1934.
T.: *Ruppia* Linnaeus [*R. maritima* Linnaeus]
B.H. 3: 1011. 1883. — *Naiadaceae* tribus *Potameae,* p.p.
E.P. 2 (1): 210. 1889 (Ascherson). — *Potamogetonaceae* tribus *Potamogetoneae,* p.p.
Hutch. (2): 558. 1959. — *Ruppiaceae.*
The family name was first published by Horaninow (1834) but his circumscription, which included *Potamogeton,* rendered the name illegitimate.

Ruscaceae *J. Hutchinson,* Fam. Fl. Pl. 2: 109. *fig. 41.* 1934.
T.: *Ruscus* Linnaeus [*R. aculeatus* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 192. 1929]
B.H. 3: 764. 1883. — *Liliaceae* tribus *Asparageae,* p.p.
E.P. Ed. 2. 15a: 366. 1930 (K. Krause). — *Liliaceae* subfam. *Asparagoideae* tribus *Asparageae,* p.p.
Hutch. (2): 619. 1959. — *Ruscaceae.*

Rutaceae *A. L. de Jussieu,* Gen. Pl. 296. 1789.
T.: *Ruta* Linnaeus [*R. graveolens* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 192. 1929]
B.H. 1: 278. 1862. — *Rutaceae.*
E.P. Ed. 2. 19a: 187. 1931 (Engler †). — *Rutaceae.*
Hutch. (1): 353. 1959. — *Rutaceae.*

Sabiaceae *Blume,* Mus. Bot. Lugd.-Bat. 1: 368. 1851.
T.: *Sabia* Colebrooke [*S. lanceolata* Colebrooke]
B.H. 1: 413. 1862. — *Sabiaceae.*
E.P. 3 (5): 367. 1895 (O. Warburg). — *Sabiaceae.*
Hutch. (1): 361. 1959. — *Sabiaceae.*

Salicaceae *Mirbel,* Élém. Phys. Vég. 2: 905. 1815 ('*Salicineae*').
T.: *Salix* Linnaeus [*S. pentandra* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 190. 1929]
B.H. 3: 411. 1880. — *Salicineae.*
E.P. 3 (1): 29. 1887 (Pax). — *Salicaceae.*
Hutch. (1): 187. 1959. — *Salicaceae.*

Salvadoraceae *Lindley*, Introd. Nat. Syst. ed. 2. 269. 1836.
T.: *Salvadora* Linnaeus [*S. persica* Linnaeus]
B.H. 2: 680. 1876. — *Salvadoraceae.*
E.P. Ed. 2. 20b: 232. 1942 (Sleumer). — *Salvadoraceae.*
Hutch. (1): 312. 1959. — *Salvadoraceae.*

Santalaceae *R. Brown*, Prodr. 1: 350. 1810.
T.: *Santalum* Linnaeus [*S. album* Linnaeus]
B.H. 3: 217. 1818. — *Santalaceae*, excl. tribus *Grubbieae.*
E.P. Ed. 2. 16b: 52. 1935 (Pilger). — *Santalaceae.*
Hutch. (1): 339. 1959. — *Santalaceae.*
The genus *Champereia*, sometimes referred to *Santalaceae*, is placed by Hutchinson (1959) in the family *Opiliaceae.*

Sapindaceae *A. L. de Jussieu*, Gen. Pl. 246. 1789 ('*Sapindi*').
T.: *Sapindus* Linnaeus [*S. saponarius* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 151. 1929]
B.H. 1: 388, 389, 392. 1862. — *Sapindaceae* subord. *Sapindeae* et *Dodonaeae.*
E.P. 3 (5): 277. 1895 (Radlkofer). *Sapindaceae.*
Hutch. (1): 360. 1959. — *Sapindaceae* (excl. *Bretschneideraceae*).

Sapotaceae *A. L. de Jussieu*, Gen. Pl. 151. 1789 ('*Sapotae*').
T.: *Achras* Linnaeus (syn. *Sapota* Miller) [*A. zapota* Linnaeus]
B.H. 2: 650. 1876. — *Sapotaceae.*
E.P. 4 (1): 126. 1890-91 (Engler). — *Sapotaceae.*
Hutch. (1): 350. 1959. — *Sapotaceae.*

Sarcolaenaceae *Caruel*, Nuova Giorn. Ital. 13: 221. 1881.
T.: *Sarcolaena* Thouars [*S. multiflora* Thouars; vide Bullock, Kew Bull. 1959: ined.]
B.H. 1: 194. 1862. — *Chlaenaceae.*
E.P. 3 (6): 168. 1893 (Schumann). — *Chlaenaceae.*
Hutch. (1): 283. 1959. — *Sarcolaenaceae.*

Sarcospermataceae *Lam*, Bull. Jard. Bot. Buitenzorg, Sér. 3. 7: 248. 1925 ('*Sarcospermaceae*').
T.: *Sarcosperma* J. D. Hooker [*S. arboreum* (Buchanan) J. D. Hooker *]
B.H. 2: 655. 1865. — *Sapotaceae*, p.p.
E.P. 4 (1): 146. 1891 (Engler). — *Sapotaceae* tribus *Palaquieae* subtribus *Sideroxylinae*, p.p.
Hutch. (1): 351. 1959. — *Sarcospermaceae.*

Sargentodoxaceae *Stapf*, Bot. Mag. 151: sub *tt. 9111-9112.* 1925.
T.: *Sargentodoxa* Rehder et E. H. Wilson [*S. cuneata* (Oliver) Rehder et E. H. Wilson]
Hutch. (1): 407. 1959. — *Sargentodoxaceae.*
Sargentodoxa cuneata was described by Oliver (Hooker, Ic. Pl. 19: *t. 1817.* 1889) as *Holboellia cuneata.* His material, however, was a mixture and the name was retained by Diels (Engler, Bot. Jahrb. 29: 343. 1900) for the male part. The genus was referred to *Lardizabalaceae.*

Sarraceniaceae *Dumortier*, Anal. Fam. Pl. 53. 1829 [De la Pylaie, Mém. Soc. Linn. Paris 6: 379. 1827 (sine nom.)].
T.: *Sarracenia* Linnaeus [*S. purpurea* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 160. 1929]
B.H. 1: 48. 1862. — *Sarraceniaceae.*
E.P. Ed. 2. 17b: 704. 1936 (Uphof). — *Sarraceniaceae.*
Hutch. (1): 468. 1959. — *Sarraceniaceae.*

Saurauiaceae *J. G. Agardh*, Theoria Syst. Pl. Fam. Phan. 110. 1858 ('*Sauraujeae*').
T.: *Saurauia* Willdenow [*S. excelsa* Willdenow]
B.H. 1: 179. 1862. — *Ternstroemiaceae* tribus *Sauraujeae*, p.p.
E.P. Ed. 2. 21: 40. 1925 (Gilg et Wedermann). — *Actinidiaceae* subfam. *Saurauioideae.*
Hutch. (1): 274. 1959. — *Saurauiaceae.*

Saururaceae *A. Richard*, Nouv. Élém. Bot. ed. 4. 419. 1828 ('*Saurureae*').
T.: *Saururus* Linnaeus [*S. cernuus* Linnaeus]
B.H. 3: 126, 127. 1880. — *Piperaceae* tribus *Saurureae*, p.p.
E.P. 3 (1): 1. 1887 (Engler). — *Saururaceae.*
Hutch. (1): 420. 1959. — *Saururaceae.*

Saxifragaceae *A. L. de Jussieu*, Gen. Pl. 308. 1789 ('*Saxifrageae*').
T.: *Saxifraga* Linnaeus [*S. granulata* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 154. 1929]
B.H. 1: 629, 630. 1865. — *Saxifrageae* tribus *Saxifrageae*, p.p.
E.P. Ed. 2. 18a: 74. 1930 (Engler). — *Saxifragaceae*, p.p.
Hutch. (1): 459. 1959. — *Saxifragaceae.*

*) Lectotype; of the three species referred to the genus by Hooker (B.H. 2: 655. 1865) *S. arboreum* seems to have been the best known.

Scheuchzeriaceae *J. G. Agardh,* Theoria Syst. Pl. Fam. Phan. 44. 1858.
T.: *Scheuchzeria* Linnaeus [*S. palustris* Linnaeus]
B.H. 3: 1010. 1883. — *Naiadaceae* tribus *Juncagineae,* p.p.
E.P. 2 (1): 225. 1889 (Buchenau et Hieronymus). — *Juncaginaceae,* p.p.
Hutch. (2): 544. 1959. — *Scheuchzeriaceae.*

Schisandraceae *G. Don,* Gen. Syst. 1: 101. 1831 (*'Schizandriaceae'*).
T.: *Schisandra* Michaux, nom. cons. [*S. coccinea* Michaux; vide I.C.B.N. 238. 1956]
B.H. 1: 17. 1862. — *Magnoliaceae* tribus *Schizandreae.*
E.P. 3 (2): 17. 1888 (Prantl). — *Magnoliaceae* tribus *Schizandreae.*
Hutch. (1): 129. 1959. — *Schisandraceae.*
See also A. C. Smith in Sargentia 7: 1 (1947).

Scrophulariaceae *A. L. de Jussieu,* Gen. Pl. 117. 1789 (*'Scrophulariae'*).
T.: *Scrophularia* Linnaeus [*S. nodosa* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 168. 1929]
B.H. 2: 913. 1876. — *Scrophularineae.*
E.P. 4 (3b): 39. 1891 (R. Wettstein). — *Scrophulariaceae.*
Hutch. (1): 488. 1959. — *Scrophulariaceae.*

Scyphostegiaceae *J. Hutchinson,* Fam. Fl. Pl. 1: 229. *fig. 168.* 1926.
T.: *Scyphostegia* Stapf [*S. borneensis* Stapf]
E.P. Nachtr. 173. 1897 (Engler). — *Monimiaceae,* genus anomalum.
Hutch. (1): 326. 1959. — *Scyphostegiaceae.*
Stapf (Trans. Linn. Soc. London, Ser. 2. Bot. 4: 218. 1894) referred *Scyphostegia,* somewhat doubtfully, to the *Monimiaceae.*

Scytopetalaceae *Engler* in Engler et Prantl, Nat. Pflanzenfam. Nachtr. 242. 1897.
T.: *Scytopetalum* Pierre ex Engler [*S. klaineanum* Pierre ex Engler]
E.P. Nachtr. 242. 1897 (Engler). — *Scytopetalaceae,* p.p.
Hutch. (1): 249. 1959. — *Scytopetalaceae.*
See also E.P. Nachtr. 3: 217. 1907 (Engler).

Selaginaceae *Choisy,* Mém. Fam. Sélag. 19. *tt. 1-5.* 1823 (*'Selagineae'*).
T.: *Selago* Linnaeus [*S. corymbosa* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 168. 1929]
B.H. 2: 1126. 1876. — *Selagineae,* p.p.
E.P. 4 (3b): 80. 1891 (R. Wettstein). — *Scrophulariaceae* subfam. *Antirrhinoideae* tribus *Selagineae.*
Hutch. (1): 505. 1959. — *Selaginaceae.*

Simaroubaceae *A. P. Decandolle,* Ann. Mus. Hist. Nat. Paris 17: 422. 1811 (*'Simarubeae'*).
T.: *Simarouba* Aublet [*S. amara* Aublet]
B.H. 1: 306. 1862. — *Simarubeae,* p.p.
E.P. Ed. 2. 19a: 359. 1931 (Engler †). — *Simarubaceae,* p.p.
Hutch. (1): 354. 1959. — *Simaroubaceae.*
Simarouba Aublet (1775) is a later homonym of the same name published by Boehmer (1760), and requires to be conserved.

Smilacaceae *Ventenat,* Tabl. Regne Vég. 2: 146. 1799 (*'Smilaceae'*).
T.: *Smilax* Linnaeus [*S. aspera* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 191. 1929]
B.H. 3: 751. 1883. — *Liliaceae* tribus *Smilaceae.*
E.P. Ed. 2. 15a: 381. 1930 (K. Krause). — *Liliaceae* subfam. *Smilacoideae.*
Hutch. (2): 618. 1959. — *Smilacaceae.*

Solanaceae *A. L. de Jussieu,* Gen. Pl. 124. 1789 (*'Solaneae'*).
T.: *Solanum* Linnaeus [*S. nigrum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 132. 1929]
B.H. 2: 882. 1876. — *Solanaceae.*
E.P. 4 (3b): 4. 1891 (R. Wettstein). — *Solanaceae.*
Hutch. (1): 484. 1959. — *Solanaceae.*

Sonneratiaceae *Engler* in Engler et Prantl, Nat. Pflanzenfam. Nachtr. 261. 1897.
T.: *Sonneratia* Linnaeus f., nom. cons. [*S. acida* Linnaeus f.; vide I.C.B.N. 258. 1956]
B.H. 1: 784. 1867. — *Lythrarieae* tribus *Lythreae,* p.p.
E.P. 3 (7): 16. 1892 (Niedenzu). — *Blattiaceae* subfam. *Blattioideae.*
Hutch. (1): 306. 1959. — *Sonneratiaceae.*

Sparganiaceae *C. H. Schultz,* Syst. Nat. Pflanzenr. 295. 1832 (*'Sparganioideae'*).
T.: *Sparganium* Linnaeus [*S. erectum* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 187. 1929]
B.H. 3: 955. 1883. — *Typhaceae,* p.p.
E.P. 2 (1): 192. 1889 (Engler). — *Sparganiaceae*
Hutch. (2): 637. 1959. — *Sparganiaceae.*

Sphaerosepalaceae *van Tieghem ex Bullock,* Taxon 7: 31. 1958 * [*van Tieghem,* Journ. de Bot. 14: 53. 1900 ('*Sphérosépalacées*')].
T.: *Sphaerosepalum* J. G. Baker [*S. alternifolium* J. G. Baker]
E.P. 3 (6): 310, 314. 1895 (O. Warburg). — *Bixaceae* tribus *Sphaerosepaleae.* — Ed. 2. 21: 317. 1925 (Pilger). — *Cochlospermaceae* tribus *Sphaerosepaleae.*
Hutch. (1): 284. 1959. — *Sphaerosepalaceae.*
J. G. Baker (Journ. Linn. Soc. London 21: 321. 1884) referred *Sphaerosepalum* to *Guttiferae.*

Sphenocleaceae *Martius ex Lindley,* Introd. Nat. Syst. ed. 2. 238. 1836.
T.: *Sphenoclea* J. Gaertner, nom. cons. [*S. zeylanica* J. Gaertner; — I.C.B.N. 274. 1956]
B.H. 2: 560. 1876. — *Campanulaceae* tribus *Campanuleae,* p.p.
E.P. 4 (5): 60. 1889 (Schönland). — *Campanulaceae* subfam. *Campanuloideae* tribus *Sphenocleae.*
Hutch. (1): 476. 1959. — *Campanulaceae,* p.p.
See also Airy Shaw in Fl. Malesiana 4 (1): 27 (1948).

Spigeliaceae *Martius,* Nov. Gen. et Sp. 2: 132. 1827.
T.: *Spigelia* Linnaeus [*S. anthelmia* Linnaeus]
B.H. 2: 787, 790. 1876. — *Loganiaceae* tribus *Eulogalieae* subtribus *Spigelieae.*
E.P. 4 (2): 32. 1892 (Solereder). — *Loganiaceae* subfam. *Loganioideae* tribus *Spigelieae.*
Hutch. (1): 376. 1959. — *Spigeliaceae.*

Stachyuraceae *J. G. Agardh,* Theoria Syst. Pl. Fam. Phan. 152. 1858 ('*Stachyureae*').
T.: *Stachyurus* Siebold et Zuccarini [*S. praecox* Siebold et Zuccarini]
B.H. 1: 184. 1862. — *Ternstroemiaceae* tribus *Sauraujeae,* p.p.
E.P. Ed. 2. 21: 457. 1925 (Gilg). — *Stachyuraceae.*
Hutch. (1): 183. 1959. — *Stachyuraceae.*
See also van Tieghem in Journ. de Bot. 14: 1-12 (1900).

Stackhousiaceae *R. Brown ex J. E. Smith* in Rees, Cycl. 33: *ord. alph.* 1819 ('*Stackhouseae*').
T.: *Stackhousia* J. E. Smith [*S. viminea* J. E. Smith]
B.H. 1: 371. 1862. — *Stackhousieae.*
E.P. Ed. 2. 20b: 240. 1942 (Mattfeld). — *Stackhousiaceae.*
Hutch. (1): 322. 1959. — *Stackhousiaceae.*
The family name *Stackhouseae* was effectively though not validly published by Brown in Flinders, Voy. Terra Austr. 2: 555 (1814), and was taken up by Smith; the latter supplied the first binomial under the generic name *Stackhousia,* also published (Trans. Linn. Soc. London 4: 218) in 1819. See also Stant in Kew Bull. 1951: 309 (1952).

Staphyleaceae *Lindley,* Syn. Brit. Fl. 75. 1829.
T.: *Staphylea* Linnaeus [*S. pinnata* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 142. 1929]
B.H. 1: 392. 1862. — *Sapindaceae* subordo *Staphyleae.*
E.P. Ed. 2. 20b: 255. 1942 (J. Krause). — *Staphyleaceae.*
Hutch. (1): 367. 1959. — *Staphyleaceae.*

Stegnospermataceae *Nakai,* Journ. Jap. Bot. 18: 108. 1942 ('*Stegnospermaceae*').
T.: *Stegnosperma* Bentham [*S. halimifolium* Bentham]
B.H. 3: 87. 1880. — *Phytolaccaceae,* genus anomalum.
E.P. Ed. 2. 16c: 160 (Heimerl). — *Phytolaccaceae* tribus *Stegnospermeae.*
Hutch. (1): 222. 1959. — *Stegnospermaceae.*

Stenomeridaceae *J. G. Agardh,* Theoria Syst. Pl. Fam. Phan. 66. 1858 ('*Stenomerideae*').
T.: *Stenomeris* Planchon [*S. dioscoreifolia* Planchon]
B.H. 3: 745. 1883. — *Dioscoreaceae,* p.p.
E.P. Ed. 2. 15a: 458. 1930 (Pax). — *Dioscoreaceae* tribus *Stenomerideae,* p.p.
Hutch. (2): 654. 1959. — *Stenomeridaceae.*

Sterculiaceae *Ventenat,* Jardin Malm. 2: sub *t. 91.* 1805.
T.: *Sterculia* Linnaeus [*S. foetida* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 190. 1929]
B.H. 1: 214. 1862. — *Sterculiaceae.*
E.P. 3 (6): 69. 1890 (Schumann). — *Sterculiaceae.*
Hutch. (1): 251. 1959. — *Sterculiaceae.*

Stilbaceae *Kunth,* Handb. Bot. 393. 1831 ('*Stilbineae*').
T.: *Stilbe* Bergius [*S. vestita* Bergius]
B.H. 2: 1132. 1876. — *Verbenaceae* tribus *Stilbeae.*

*) In spite of the disclaimer (Taxon 7: 3. 1958) concerning validity of publication, Mr. J. E. Dandy is of opinion that this must be accepted.

E.P. 4 (3a): 144. 1895 (Briquet). — *Verbenaceae* subfam. *Stilboideae.*
Hutch. (1): 395. 1959. — *Stilbeaceae.*

Strasburgeriaceae *Solereder,* Syst. Anat. Dicot. Ergänz. 45. 1908 [*van Tieghem,* Journ. de Bot. 17: 204. 1903 ('*Strasburgeriacées*')].
T.: *Strasburgeria* Baillon [*S. calliantha* Baillon]
E.P. Ed. 2. 21: 87. 1925 (Engler). — *Strasburgeriaceae.*
Hutch. (1): 281. 1959. — *Strasburgeriaceae.*
Baillon (Adansonia 11: 372. 1876) referred *Strasburgeria* to *Ternstroemiaceae* (*Theaceae* of this list).

Strelitziaceae *J. Hutchinson,* Fam. Fl. Pl. 2: 72. 1934.
T.: *Strelitzia* Aiton [*S. reginae* Aiton]
B.H. 3: 639. 1883. — *Scitamineae* tribus *Museae,* p.p.
E.P. Ed. 2. 15a: 532. 1930 (Winkler). — *Musaceae* subfam. *Strelitzioideae.*
Hutch. (2): 582. 1959. — *Strelitziaceae.*

Strychnaceae *Link,* Handb. 1: 439. 1829. — *Dumortier,* Anal. Fam. Pl. 21, 26. 1929 ('*Stricnideae, Strychnideae*').
T.: *Strychnos* Linnaeus [*S. nux-vomica* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 133. 1929]
B.H. 2: 788. 1876. — *Loganiaceae* tribus *Eulogancieae* subtribus *Strychneae.*
E.P. 4 (2): 37. 1892 (Solereder). — *Loganiaceae* subfam. *Loganioideae* tribus *Strychneae.*
Hutch. (1): 377. 1959. — *Strychnaceae.*

Stylidiaceae *R. Brown,* Prodr. 565. 1810 ('*Stylideae*').
T.: *Stylidium* Swartz, nom. cons. [*S. graminifolium* Swartz; — I.C.B.N. 274. 1956]
B.H. 2: 534. 1876. — *Stylidieae.*
E.P. 4 (5): 79. 1889 (Schönland). — *Candolleaceae.*
Hutch. (1): 480. 1959. — *Stylidiaceae.*

Styracaceae *A. Richard,* Nouv. Élém. Bot. ed. 4. 474. 1828 ('*Styraceae*').
T.: *Styrax* Linnaeus [*S. officinalis* Linnaeus]
B.H. 2: 666. 1876. — *Styraceae,* p.p.
E.P. 4 (1): 172. 1891 (Gürke). — *Styracaceae,* p.p.
Hutch. (1): 168. 1959. — *Styracaceae.*

Symplocaceae *D. Don,* Prodr. Fl. Nepal. 144. 1825 ('*Symplocineae*').
T.: *Symplocos* Jacquin [*S. martinicensis* Jacquin]
B.H. 2: 668. 1876. — *Styraceae,* p.p.
E.P. 4 (1): 165. 1891 (Gürke). — *Symplocaceae.*
Hutch. (1): 170. 1959. — *Symplocaceae.*

Taccaceae *Dumortier,* Anal. Fam. Pl. 57, 58. 1829.
T.: *Tacca* J. R. et G. Forster, nom. cons. [*T. pinnatifida* J. R. et G. Forster; — I.C.B.N. 228. 1958]
B.H. 3: 740. 1883. — *Taccaceae.*
E.P. Ed. 2. 15a: 434. 1930 (Pax). — *Taccaceae.*
Hutch. (2): 683. 1959. — *Taccaceae.*

Tamaricaceae *S. F. Gray,* Nat. Arr. Brit. Pl. 2: 554. 1821 ('*Tamaricinae*').
T.: *Tamarix* Linnaeus [*T. gallica* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 142. 1929]
B.H. 1: 159. 1862. — *Tamariscineae,* excl. tribus *Fouquiereae.*
E.P. Ed. 2. 21: 282. 1925 (Niedenzu). — *Tamaricaceae.*
Hutch. (1): 228. 1959. — *Tamaricaceae.*

Tecophilaeaceae *Leybold,* Bonplandia 10: 370. 1862 ('*Tecophileoceae*').
T.: *Tecophilaea* Colla [*T. violiflora* Colla]
B.H. 3: 673. 1883. — *Haemodoraceae* tribus *Conanthereae.*
E.P. Ed. 2. 15a: 427. 1930 (Pax et K. Hoffmann) — *Amaryllidaceae* tribus *Conanthereae;* et *l.c.* 188 (Engler). — *Cyanastraceae.*
Hutch. (2): 613. 1959. — *Tecophilaeaceae.*

Tetracentraceae *A. C. Smith,* Journ. Arnold Arb. 26: 135. 1945 [*van Tieghem,* Journ. de Bot. 14: 355, 361. 1900 ('*Tetracentracées*')].
T.: *Tetracentron* Oliver [*T. sinense* Oliver]
E.P. 3 (2): 273. 1891 (Engler). — *Trochodendraceae,* p.p.
Hutch. (1): 179. 1959. — *Tetracentraceae.*
Oliver (Hooker, Ic. Pl. 19: sub *t.* 1892. 1889) referred *Tetracentron* to *Magnoliaceae.*

Tetrameristaceae *J. Hutchinson ex Metcalfe et Chalk,* Anat. Dicot. (1): 339. 1950.
T.: *Tetramerista* Miquel [*T. glabra* Miquel]
B.H. 1: 318. 1862. — *Ochnaceae* tribus *Ochneae,* p.p.
E.P. Ed. 2. 21: 152. 1925 (Melchior). — *Theaceae* tribus *Tetrameristeae.*
Hutch. (1): 277. 1959. — *Tetrameristaceae.*
This family has been referred also to *Marcgraviaceae.* Hutchinson (1959) gave the first formal diagnosis of the family.

Theaceae *D. Don,* Prodr. Fl. Nepal. 224. 1825 [*Mirbel,* Bull. Soc. Philom. 3: 381. 1813 ('*Theacées*')].
T.: *Thea* Linnaeus [*T. sinensis* Linnaeus, syn. *Camellia sinensis* (Linnaeus) Kuntze]
B.H. 1: 177, 178. 1862. — *Ternstroemiaceae* tribus *Ternstroemieae.*
E.P. Ed. 2. 21: 109. 1925 (Melchior). — *Theaceae* tribus *Camellieae* et *Ternstroemieae.*
Hutch. (1): 272. 1959. — *Theaceae.*

Theligonaceae *Dumortier,* Anal. Fam. Pl. 15, 17. 1829 ('*Theligoneae*').
T.: *Theligonum* Linnaeus (syn. *Cynocrambe* Adanson, nom. illeg.) [*T. cynocrambe* Linnaeus]
B.H. 3: 351. 1880. — *Urticaceae* tribus *Thelygoneae.*
E.P. 3 (1a): 121. 1893 (Poulsen). — *Cynocrambaceae.* — Ed. 2. 16c: 368. 1934 (Ulbrich). — *Thelygonaceae.*
Hutch. (1): 441. 1959. — *Cynocrambaceae.*

Theophrastaceae *D. Don* in Lindley, Bot. Reg. sub *t. 1764.* 1835 ('*Theophrasteae*').
T.: *Theophrasta* Linnaeus [*T. americana* Linnaeus]
B.H. 2: 641. 1876. — *Myrsineae* tribus *Theophrasteae.*
E.P. 4 (1): 88. 1889 (Pax). — *Myrsinaceae* subfam. *Theophrastoideae.*
Hutch. (1): 346. 1959. — *Theophrastaceae.*
Family status was given to *Theophrastaceae* by Mez (in Engler, Pflanzenr. 1903) and this was confirmed in E.P. Nachtr. 3: 267. 1907 (Engler).

Thismiaceae *Miquel,* Fl. Ind. Bat. 3: 615. 1858.
T.: *Thismia* Griffith [*T. brunonis* Griffith]
B.H. 3: 456. 1883. — *Burmanniaceae* tribus *Thismieae.*
E.P. 2 (6): 47. 1889 (Engler). — *Burmanniaceae* tribus *Thismieae.*
Hutch. (2): 687. 1959. — *Thismiaceae.*
Jonker (A monograph of the *Burmanniaceae,* Utrecht, 1938) included this family (but not *Corsiaceae*) in *Burmanniaceae.* See also Airy-Shaw in Kew Bull. 1952: 277-279, *cum fig.* (1952).

Thurniaceae *Engler,* Syll. Pflanzenfam. ed. 5. 94. 1907.
T.: *Thurnia* J. D. Hooker [*T. jenmanii* J. D. Hooker; vide Bullock, Kew Bull. 1959: ined.]
B.H. 3: 869. 1883. — *Juncaceae,* genus anomalum.
E.P. Ed. 2. 15a: 58. 1930 (Pilger). — *Thurniaceae.*
Hutch. (2): 699. 1959. — *Thurniaceae.*

Thymelaeaceae *A. L. de Jussieu,* Gen. Pl. 76. 1789 ('*Thymelaeae*').
T.: *Thymelaea* Endlicher, nom. cons. [*T. sanamunda* Allioni; vide adnot. infra]
B.H. 3: 186. 1880. — *Thymelaeaceae,* excl. tribus *Aquilarieae* et genus anomalum.
E.P. 3 (6a): 216. 1894 (Gilg). — *Thymelaeaceae,* excl. subfam. *Aquilarioideae.*
Hutch. (1): 215. 1959. — *Thymelaeaceae.*
The type species of *Thymelaea* cited in I.C.B.N. 256 (1956) is *T. bauhinii* Endlicher. This name is illegitimate, being antedated by *T. sanamunda* Allioni; both are based upon *Daphne thymelaea* Linnaeus.

Tiliaceae *A. L. de Jussieu,* Gen. Pl. 289. 1789.
T.: *Tilia* Linnaeus [*T. europaea* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 161. 1929]
B.H. 1: 228. 1862. — *Tiliaceae.*
E.P. 3 (6): 8. 1890 (Schumann). — *Tiliaceae.*
Hutch. (1): 250. 1959. — *Tiliaceae* (excl. *Elaeocarpaceae*).

Tovariaceae *Pax* in Engler et Prantl, Nat. Pflanzenfam. 3 (2): 207. 1891.
T.: *Tovaria* Ruiz et Pavon, nom. cons. [*T. pendula* Ruiz et Pavon; — I.C.B.N. 240. 1956]
B.H. 1: 110. 1862. — *Capparideae,* p.p.
E.P. 3 (2): 207. 1891 (Pax). — Ed. 2. 17b: 224. 1936 (Pax et K. Hoffmann). — *Tovariaceae.*
Hutch. (1): 226. 1959. — *Tovariaceae.*

Trapaceae *Dumortier,* Anal. Fam. Pl. 36, 39. 1829.
T.: *Trapa* Linnaeus [*T. natans* Linnaeus]
B.H. 1: 793. 1867. — *Onagrarieae,* p.p.
E.P. 3 (7): 223. 1893 (Raimann). — *Hydrocaryaceae.*
Hutch. (1): 447. 1959. — *Trapaceae.*

Tremandraceae *A. P. Decandolle,* Prodr. 1: 343. 1824 ('*Tremandreae*').
T.: *Tremandra* A. P. Decandolle [*T. stelligera* A. P. Decandolle; vide Bullock, Kew Bull. 1959: ined.]
B.H. 1: 133. 1862. — *Tremandreae.*
E.P. 3 (4): 320. 1896 (Chodat). — *Tremandraceae.*
Hutch. (1): 223. 1959. — *Tremandraceae.*
See also Bullock, Kew Bull. 1957: 409. 1958.

Trichopodaceae *J. Hutchinson,* Fam. Fl. Pl. 2: 143. *fig.* 55. 1934.
T.: *Trichopus* J. Gaertner [*T. zeylanicus* J. Gaertner]
B.H. 3: 745. 1883. — *Dioscoreaceae,* p.p.
E.P. Ed. 2. 15a: 461. 1930 (Knuth). — *Dioscoreaceae* tribus *Stenomerideae,* p.p.
Hutch. (2): 654. 1959. — *Trichopodaceae.*

Trigoniaceae *Endlicher,* Ench. Bot. 570. 1841.
T.: *Trigonia* Aublet [*T. villosa* Aublet]
B.H. 1: 977. 1867. — *Vochysiaceae,* p.p.
E.P. 3 (4): 309. 1896 (O. G. Petersen). — *Trigoniaceae.*
Hutch. (1): 234. 1959. — *Trigoniaceae.*

Trilliaceae *Lindley,* Veg. Kingd. 218. 1846.
T.: *Trillium* Linnaeus [*T. cernuum* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 148. 1929]
B.H. 3: 762, 832. 1883. — *Liliaceae* tribus *Medeoleae.*
E.P. Ed. 2. 15a: 373. 1930 (K. Krause). — *Liliaceae* subfam. *Asparagoideae* tribus *Parideae.*
Hutch. (2): 615. 1959. — *Trilliaceae.*

Trimeniaceae *Gibbs,* Phytogeogr. Fl. Arfak Mts. 135. 1917.
T.: *Trimenia* Seemann [*T. weinmanniifolia* Seemann]
B.H. 3: 143. 1880. — *Monimiaceae* tribus *Monimieae,* p.p.
E.P. 3 (2): 98. 1889 (Pax). — *Monimiaceae* subfam. *Monimioideae* tribus *Hortonieae,* p.p.
Hutch. (1): 138. 1959. — *Trimeniaceae.*

Triuridaceae *Gardner,* Trans. Linn. Soc. London 19: 16. *t. 15.* 1843 (*'Triuraceae'*).
T.: *Triuris* Miers [*T. hyalina* Miers]
B.H. 3: 1001. 1883. — *Triurideae.*
E.P. 2 (1): 235. 1889 (Engler). — *Triuridaceae.*
Hutch. (2): 547. 1959. — *Triuridaceae.*
See also E.P. Nachtr. 4: 8. 1914 (Pilger et K. Krause).

Trochodendraceae *Seemann,* Journ. Bot. 2: 238. 1864 (*'Trochodendreae'*).
T.: *Trochodendron* Siebold et Zuccarini [*T. aralioides* Siebold et Zuccarini]
B.H. 1: 954. 1867. — *Magnoliaceae* tribus *Trochodendreae,* p.p.
E.P. 3 (2): 21. 1888 (Prantl). — *Trochodendraceae,* p.p.
Hutch. (1): 131. 1959. — *Trochodendraceae,* p.p.

Harms (E.P. Nachtr. 3: 110. 1906) also included *Cercidiphyllum* Siebold et Zuccarini, *Euptelea* Siebold et Zuccarini, and *Eucommia* Oliver in this family; all these genera are listed here as the types of distinct families. Hutchinson (1959) included *Euptelea.*

Tropaeolaceae *A. P. Decandolle,* Prodr. 1: 683. 1824 (*'Tropaeoleae'*).
T.: *Tropaeolum* Linnaeus [*T. majus* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 149. 1929]
B.H. 1: 274. 1862. — *Geraniaceae* tribus *Pelargonieae,* p.p.
E.P. Ed. 2. 19a: 67. 1931 (Farenholtz). — *Tropaeolaceae.*
Hutch. (1): 498. 1959. — *Tropaeolaceae.*

Turneraceae *A. P. Decandolle,* Prodr. 3: 345. 1828.
T.: *Turnera* Linnaeus [*T. ulmifolia* Linnaeus]
B.H. 1: 806. 1867. — *Turneraceae.*
E.P. Ed. 2. 21: 459. 1925 (Gilg). — *Turneraceae.*
Hutch. (1): 236. 1959. — *Turneraceae.*

Typhaceae *A. L. de Jussieu,* Gen. Pl. 25. 1789 (*'Typhae'*).
T.: *Typha* Linnaeus [*T. angustifolia* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 187. 1929]
B.H. 3: 954. 1883. — *Typhaceae,* p.p.
E.P. 2 (1): 183. 1889 (Engler). — *Typhaceae.*
Hutch. (2): 637. 1959. — *Typhaceae.*

Ulmaceae *Mirbel,* Élém. Phys. Vég. 2: 905. 1815.
T.: *Ulmus* Linnaeus [*U. campestris* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 137. 1929]
B.H. 3: 343. 1880. — *Urticaceae* tribus *Ulmeae.*
E.P. 3 (1): 59. 1888 (Engler). — *Ulmaceae.*
Hutch. (1): 199. 1959. — *Ulmaceae.*

Umbelliferae *A. L. de Jussieu,* Gen. Pl. 218. 1789. — Nom. alt.; *Apiaceae.*
T.: *Apium* Linnaeus [*A. graveolens* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 142. 1929. — I.N.G. 21/03689]
B.H. 1: 859. 1867. — *Umbelliferae.*
E.P. 3 (8): 63. 1897-8 (Drude). — *Umbelliferae.*
Hutch. (1): 471. 1959. — *Umbelliferae.*

Urticaceae *A. L. de Jussieu,* Gen. Pl. 400. 1789 (*'Urticae'*).

T.: *Urtica* Linnaeus [*U. dioica* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 188. 1929]
B.H. 3: 341. 1880. — *Urticaceae* tribus *Urticeae.*
E.P. 3 (1): 98. 1888 (Engler). — *Urticaceae.*
Hutch. (1): 202. 1959. — *Urticaceae.*

Vacciniaceae *S. F. Gray,* Nat. Arr. Brit. Pl. 2: 404. 1821 ('*Vaccinieae*').
T.: *Vaccinium* Linnaeus [*V. myrtillus* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 150. 1929]
B.H. 2: 564. 1876. — *Vacciniaceae.*
E.P. 4 (1): 32, 49. 1889 (Drude). — *Ericaceae* subfam. *Vaccinioideae.*
Hutch. (1): 296. 1959. — *Vacciniaceae.*

Vahliaceae *Dandy* in J. Hutchinson, Fam. Fl. Pl. ed. 2. (1): 461. *fig. 302.* 1959.
T.: *Vahlia* Thunberg [*V. capensis* Thunberg]
B.H. 1: 637. 1865. — *Saxifrageae* tribus *Saxifrageae,* p.p.
E.P. Ed. 2. 18a: 166. 1930 (Engler). — *Saxifragaceae* subfam. *Saxifragoideae* tribus *Saxifrageae* subtribus *Vahliinae.*
Hutch. (1): 461. 1959. — *Vahliaceae.*

Valerianaceae *A. P. Decandolle* in Lamarck, Fl. Franç. ed. 3. 4: 232. 1805 ('*Valerianeae*').
T.: *Valeriana* Linnaeus [*V. officinalis* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 117. 1929]
B.H. 2: 151. 1873. — *Valerianeae.*
E.P. 4 (4): 172. 1891 (Höck). — *Valerianaceae.*
Hutch. (1): 473. 1959. — *Valerianaceae.*

Velloziaceae *Endlicher,* Ench. Bot. 101. 1841 ('*Vellozieae*').
T.: *Vellozia* Vandelli [*V. candida* Mikan; vide Bullock, Kew Bull. 1959: ined.]
B.H. 3: 716. 1883. — *Amaryllideae* tribus *Vellosieae.*
E.P. Ed. 2. 15a: 431. 1930 (Pax). — *Velloziaceae.*
Hutch. (2): 678. 1959. — *Velloziaceae.*

Verbenaceae *Jaume St.-Hilaire,* Expos. Fam. Nat. 1: 245. 1805.
T.: *Verbena* Linnaeus [*V. officinalis* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 116. 1929]
B.H. 2: 1131. 1876. — *Verbenaceae* excl. tribus *Phrymeae, Stilbeae, Chloantheae,* et *Avicennieae.*
E.P. 4 (3a): 132. 1895 (Briquet). — *Verbenaceae,* excl. subfam. *Stilboideae, Chloanthoideae,* et *Avicennioideae.*
Hutch. (1): 395. 1959. — *Verbenaceae* (excl. *Avicennia*).
See also *Avicenniaceae, Chloanthaceae, Phrymaceae* and *Stilbaceae.*

Violaceae *A. P. Decandolle* in Lamarck, Fl. Franç. ed. 3. 5: 801. 1805.
T.: *Viola* Linnaeus [*V. odorata* Linnaeus; vide M. L. Green, Prop. Brit. Bot. 184. 1929]
B.H. 1: 114. 1862. — *Violarieae.*
E.P. Ed. 2. 21: 329. 1925 (Melchior). — *Violaceae.*
Hutch. (1): 230. 1959. — *Violaceae.*

Vitaceae *A. L. de Jussieu,* Gen. Pl. 267. 1789 ('*Vites*').
T.: *Vitis* Linnaeus [*V. vinifera* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 135. 1929]
B.H. 1: 386. 1862. — *Ampelideae,* p.p.
E.P. 3 (5): 427. 1896 (Gilg). — *Vitaceae,* excl. subfam. *Leeoideae.* — Ed. 2. 20d: 174, 372. 1953 (Suessenguth). — *Vitaceae.*
Hutch. (1): 344. 1959. — *Vitaceae,* p.p.
Some modern authors maintain *Leeaceae* as a family distinct from *Vitaceae.*

Vivianiaceae *Klotzsch,* Linnaea 10: 433. 1836.
T.: *Viviania* Cavanilles [*V. marifolia* Cavanilles]
B.H. 1: 270. 1862. — *Geraniaceae* tribus *Vivianieae.*
E.P. Ed. 2. 19a: 66. 1931 (Knuth). — *Geraniaceae* tribus *Vivianieae.*
Hutch. (1): 223. 1959. — *Vivianiaceae.*

Vochysiaceae *A. St.-Hilaire,* Mém. Mus. Hist. Nat. Paris 6: 253, 265. 1820 ('*Vochisieae*').
T.: *Vochysia* Aublet, nom. cons. [*V. guianensis* Aublet; — I.C.B.N. 250. 1956. — I.N.G. 11/03450]
B.H. 1: 975. 1867. — *Vochysiaceae,* p.p.
E.P. 3 (4): 312. 1896 (O. G. Petersen). — *Vochysiaceae.*
Hutch. (1): 234. 1959. — *Vochysiaceae.*

Winteraceae *Lindley,* Introd. Nat. Syst. ed. 2. 17. 1836.
T.: *Drimys* J. R. et G. Forster (syn. *Wintera* Murray) [*D. winteri* J. R. et G. Forster; vide Dandy, Journ. Bot. 71: 120. 1933]
B.H. 1: 17. 1862. — *Magnoliaceae* tribus *Wintereae,* p.p.

E.P. 3 (2): 19. 1888 (Engler). — *Magnoliaceae* tribus *Illicieae*, p.p.
Hutch. (1): 126. 1959. — *Winteraceae* (excl. *Degeneria*).
See also *Degeneriaceae*.

Xanthorrhoeaceae *Dumortier*, Anal. Fam. Pl. 60. 1829 ('*Xanthorhaeaceae*').
T.: *Xanthorrhoea* J. E. Smith [*X. resinosa* Persoon; vide Bullock, Kew Bull. 1959: ined.]
B.H. 3: 862. 1883. — *Juncaceae* tribus *Xeroteae*.
E.P. Ed. 2. 15a: 312. 1930 (K. Krause). — *Liliaceae* subfam. *Asphodeloideae* tribus *Lomandreae*.
Hutch. (2): 660. 1959. — *Xanthorrhoeaceae*.

Xyridaceae *C. A. Agardh*, Aphor. Bot. 158. 1823 ('*Xyrideae*').
T.: *Xyris* Linnaeus [*X. indica* Linnaeus]
B.H. 3: 841. 1883. — *Xyrideae*.
E.P. Ed. 2. 15a: 35. 1930 (Malme). — *Xyridaceae*.
Hutch. (2): 570. 1959. — *Xyridaceae*.

Zannichelliaceae *Dumortier*, Anal. Fam. Pl. 59, 61. 1829.
T.: *Zannichellia* Linnaeus [*Z. palustris* Linnaeus]
B.H. 3: 1011. 1883. — *Naiadaceae* tribus *Zannichellieae* et tribus *Cymodoceae*.
E.P. 2 (1): 210, 213. 1889 (Ascherson). — *Potamogetonaceae* tribus *Zannichellieae* et tribus *Cymodoceae*.
Hutch. (2): 559. 1959. — *Zannichelliaceae*.

Zingiberaceae *Lindley*, Key Struct. Phys. Syst. Bot. 69. 1835.
T.: *Zingiber* Boehmer, nom. cons. [*Z. officinale* Roscoe; — I.C.B.N. 229. 1956]
B.H. 3: 637. 1883. — *Scitamineae* tribus *Zingibereae*.
E.P. Ed. 2. 15a: 541. 1930 (Loesener). — *Zingiberaceae*.
Hutch. (2): 584. 1959. — *Zingiberaceae*.

Zosteraceae *Dumortier*, Anal. Fam. Pl. 65, 66. 1829.
T.: *Zostera* Linnaeus [*Z. marina* Linnaeus]
B.H. 3: 1011. 1883. — *Naiadaceae* tribus *Zostereae*.
E.P. 2 (1): 201. 1889 (Engler). — *Potamogetonaceae* tribus *Zostereae*.
Hutch. (2): 554. 1959. — *Zosteraceae*.

Zygophyllaceae *R. Brown* in Flinders, Voy. Terra Austr. 545. 184.. ('*Zygophylleae*').
T.: *Zygophyllum* Linnaeus [*Z. fabago* Linnaeus; vide Hitchcock, Prop. Brit. Bot. 153. 1929]
B.H. 1: 262. 1862. — *Zygophylleae*.
E.P. Ed. 2. 19a: 144. 1931 (Engler †). — *Zygophyllaceae*, p.p.
Hutch. (1): 268. 1959. — *Zygophyllaceae*.

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NOMINA GENERICA CONSERVANDA

Secretary: Prof. Dr. Rodolfo E. G. Pichi-Sermolli, Istituto Botanico "Hanbury", Università degli Studi, Via Balbi 5, Genova, Italia.

The Secretary has circulated among the Members of the Committee the reports on the proposals for the conservation of generic names prepared by the Members F. Ballard, R. E. Holttum, and R. E. G. Pichi-Sermolli. After having received Members' comments and circulated them, the Committee proceeded to vote on the proposals, with the following results:

Lomaria Willd. Mag. Naturf. Freunde Berlin 3: 160. 1809. [T.: *Lomaria spicant* (L.) Desv.] *versus Struthiopteris* [Haller, Enum. Meth. Stirp. Helv. 132. 1742] Scop. Fl. Carn. 168. 1760.

Proposal n. 179 for the Paris Congress by H. P. Fuchs [Taxon 3: 133. 1954].

Votes: In favour of conservation 0; Against conservation 4; Abstention 1.

Fuchs' proposal for the conservation of *Lomaria* is rejected for two reasons: 1) The type of *Lomaria* cannot be *Lomaria spicant* (L.) Desv., selected by Fuchs as the type species of the genus. The first occasion on which Willdenow used binomials under *Lomaria* was in his edition of Linnaeus' Species Plantarum published in 1810, the year following his publication of the genus. There is no mention of *Osmunda spicant* L. under *Lomaria*, but the plant appears under *Blechnum* L. as *Blechnum boreale* Sw. with *Osmunda spicant* cited in synonymy. Hence another species must be selected as the lectotype of *Lomaria*. 2) *Lomaria* is regarded as a taxonomic synonym of *Blechnum* L. in all

modern schemes of classification, and its inclusion in the list of nomina generica conservanda does not seem justified.

Sphenomeris Maxon, Journ. Washington Acad. Sc. 3: 144. 1913. [T.: *Sphenomeris clavata* (L.) Maxon].

Proposal to change the type of the rejected name *Stenoloma* from *S. dumosum* Fée to *S. clavatum* (L.) Fée.

Proposal no. (58) for the Montreal Congress by C. V. Morton [Taxon 8: 29. 1959].

Votes: In favour of change 3; Against 1; Abstention 1.

The typification of the genus *Stenoloma* is questionable and either *Stenoloma dumosum* or *Stenoloma clavatum* was adopted as the lectotype of the genus. In order to settle the problem of the typification and to keep *Sphenomeris* in the list of the nomina generica conservanda the majority of the Members of the Special Committee for Pteridophyta has accepted Morton's proposal to typify *Stenoloma* by *Stenoloma clavatum*. Consequently the names and types of the nomen conservandum and nomen rejiciendum should be the following: *Sphenomeris* Maxon, Journ. Washington Acad. Sc. 3: 144. 1913. [T.: *S. clavata* (L.) Maxon] *versus Stenoloma* Fée, Gen. Fil. 330. 1852. [T.: *S. clavatum* (L.) Fée].

Urostachys Herter, Beih. Bot. Centralbl. II 39: 249. 1922. *versus Huperzia* Bernh. Schrad. Journ. Bot. 1800 (2): 126. 1801, pt.; *Plananthus* P. Beauv. Prodr. Aeth. 99. 1805, pt.; *Lepidotis* P. Beauv. Prodr. Aeth. 101. 1805, pt.; *Stachygynandrum* P. Beauv. Prodr. Aeth. 105. 1805, pt. (The types are not indicated in the proposal).

Proposal no. 174 for the Paris Congress by G. Herter [Taxon 3: 129. 1954].

Votes: In favour of conservation 0; Against conservation 4; Abstention 1.

Herter bases his proposal chiefly on the rejection of *Huperzia* as a nomen dubium, and on the fact that the delimitation of this genus does not agree with that of *Urostachys*, but *Huperzia* was validly published and its circumscription was defined with reasonable clarity, so that it can be typified without any doubt by *Lycopodium selago* L., which appears to be the type species of *Urostachys* too. The only possible reason for the conservation of *Urostachys* is that Herter used this name in his Index Lycopodiorum, the most comprehensive list of names of species of Lycopodiaceae ever published, and that nearly every species is named under *Urostachys*. However, a considerable number of species of *Lycopodium* were transferred to *Huperzia* by Trevisan (Atti Soc. Ital. Sc. Nat. 17 (3): 247-249. 1875) and so this argument has little value. Consequently the conservation of *Urostachys* does not appear justified.

Woodsia R. Brown, Prodr. Fl. Nov. Holl. 158. 1810 ("*Woodia*"), corr. R. Brown, Trans. Linn. Soc. London 11: 170. 1815. *versus Woodia* R. Brown, Prodr. Fl. Nov. Holl. 158. 1810. (The types are not mentioned in the proposal).

Proposal no. 172 for the Paris Congress by H. P. Fuchs [Taxon 3: 76, 128. 1954].

Votes: In favour of conservation 0; Against conservation since the name *Woodsia* does not need to be conserved 5; Abstention 0.

The genus was briefly described by R. Brown in 1810 in an observation to another genus, and it was then named *Woodia*, but when it was exhaustively described in 1815 in a publication devoted to the genus, R. Brown wrote the generic name *Woodsia*. He then mentioned the description given in the Prodromus and immediately after stated clearly that the genus had been named in honour of his friend Joseph Woods. Accordingly there are good reasons to believe that the "original spelling" *Woodia* was due to an unintentional typographic error and the name was intended to be *Woodsia*. Consequently the "original spelling" *Woodia* is subject to correction and hence the spelling *Woodsia* can be confidently adopted, as in the past, without being in the list of nomina generica conservanda.

* * *

The result of the study of the proposals submitted to the Committee for Pteridophyta can be summarized as follows:

1) The proposals for the conservation of the generic names *Lomaria* Willd., *Urostachys* Herter, and *Woodsia* R. Brown are rejected.

2) The conservation of *Sphenomeris* Maxon is confirmed and in connection with this genus the proposal to change the type of the nomen genericum rejiciendum *Stenoloma* Fée from *S. dumosum* Fée to *S. clavatum* (L.) Fée is accepted.

FAMILY NAMES OF PTERIDOPHYTA

Four members of the Committee favour the compilation of a list of family names. It could be prepared by the Committee. It is agreed that the list should have no effect from a taxonomic point of view.

PRIORITY AND TYPIFICATION OF ORDERS

Two members favour the maintenance of Articles 16 and 17 as they are now, two other members are of the opinion that priority and typification cannot be applied, for the moment, to categories above the rank of family.

DESIGNATION OF TYPES

Four members are of the opinion that the type of a species of an infraspecific taxon of the Pteridophyta must be a permanently preserved specimen.

NEWS AND NOTES

INTERNATIONAL ASSOCIATION FOR PLANT TAXONOMY GENERAL ASSEMBLY, MONTREAL

The General Assembly of the International Association for Plant Taxonomy to be held at the IXth International Botanical Congress, Montreal 1959, will be convened on the morning of Saturday August 22nd at 9.30 a.m. at the premises of McGill University. All members of I.A.P.T. attending the IXth International Botanical Congress are requested to take part in this Assembly and to look in the Congress Bulletin for a further notice on the exact place where the Assembly will be held.

The agenda will be handed to each member at the Assembly or sent to him or her through the Congress Mail Service.

J. Lanjouw

BUREAU OF NOMENCLATURE MONTREAL

All delegates of Botanical Institutions entitled to vote in the sessions of the nomenclature section of the IXth International Botanical Congress are requested to collect their voting cards at the Bureau of Nomenclature of the Congress.

All officially enrolled personal members of the Nomenclature Section are also entitled to vote.

In order to become a member of the Nomenclature Section botanists should register at the Bureau of Nomenclature of the Congress.

This Bureau will be located at McGill University and will be open from Saturday 15 August (9.30 a.m.) until Wednesday 19 August (5.00 p.m.).

(63) PROPOSAL FOR CONSERVATION OF *STEREOCAULON* (Schreb.) Hoffm. AGAINST *STEREOCAULON* (Schreb. ?) Schrad. AND *CORALLOIDES* [Dill.] Hoffm.

The need for conservation of the lichen genera *Stereocaulon* and *Pertusaria*, if they are to continue being used in their currently accepted sense, has already been pointed out by Dodge (1948) and Lamb (1951). Because a monograph of *Stereocaulon* is in preparation and will be published shortly by the present author, it seems now desirable to make a formal proposal for the conservation of that genus corresponding to long-established usage.

The name *Stereocaulon* was originated as a section of the genus *Lichen* by Schreber (1791), but no species were cited, hence there was no original typification. Schrader (1794) used *Stereocaulon* as a genus, but made no reference to Schreber's epithet, so that it is not clear whether he was making a transfer or proposing a new genus; in any case, he typified it with one species, *St. corallinum* (L.) Schrad. (syn. *Lichen corallinus* L.), which is a species of the crustose lichen genus *Pertusaria* DC. *Stereocaulon* (Schreb. ?) Schrad. therefore applies to *Pertusaria* DC. (1805) and makes the latter illegitimate, unless conserved.

Contemporaneously with Schrader's publication, Acharius (1794) used the epithet *Stereocaulon*, referring back to Schreber, as one of the sections ("Flockar") of the genus *Lichen*. Among the species listed by him, two belong to *Stereocaulon* in the accepted sense (*Lichen pascalis* [sic] and *L. ramulosus*, = *Stereocaulon paschale* (L.) Hoffm. and *St. ramulosum* (Sw.) Räusch. respectively).

Acharius did not use *Stereocaulon* with the rank of proper genus until 1803 (Method. Lich.), for which reason his treatment is not of importance in the present consideration, except insofar that, unlike Schrader, he gave the taxon a typification acceptable to present-day usage. Whether his 1794 paper appeared before or after Schrader's work of the same year we have not been able to elucidate exactly, but probably Schrader's treatment appeared first; if this is so, his typification of *Stereocaulon* on a *Pertusaria*-species has priority.

The name *Stereocaulon*, as a genus, was first used in the current sense by Hoffmann (1796), although he included in it also a number of extraneous elements. Species cited by him which belong to *Stereocaulon* in the accepted sense are *St. quisquiliare, St. condensatum,* and *St. paschale.* Hoffmann's use of *Stereocaulon* as a genus was derived from Schreber's epithet, as is seen from his reference to the original description of the latter ("G. pl. 1668"), and so is to be regarded as a transfer.

Previous to this, however, Hoffmann himself (1789) had taken up the pre-Linnean genus name *Coralloides* of Dillenius, and made it a valid post-starting point genus by supplying a few words of description which serve as a diagnosis; one species is listed, *C. paschale* (L.) Hoffm. (Syn. *Lichen paschalis* L., *Stereocaulon paschale* (L.) Hoffm.).

In summary, the position is therefore as follows: *Stereocaulon* (Schreb.) Hoffm. (1796) corresponds in its typification to present day usage, but is antedated and rendered illegitimate by (1) *Stereocaulon* (Schreb. ?) Schrad. (1794), which = *Pertusaria, and* (2) *Coralloides* [Dill.] Hoffm. (1789), which = *Stereocaulon* in the accepted sense. It is therefore proposed to conserve *Stereocaulon* (Schreb.) Hoffm. (1796) against both *Stereocaulon* (Schreb. ?) Schrad. (1794) and *Coralloides* [Dill.] Hoffm. (1789).

The typification of these taxa is as follows:

Coralloides [Dill.] Hoffm. (1789):
C. paschale (L.) Hoffm., syn. *Lichen paschalis* L., *Stereocaulon paschale* (L.) Hoffm.

Lichen sect. *Stereocaulon* Schreb. (1791):
(no type-species listed).

Stereocaulon (Schreb. ?) Schrad. (1794):
St. corallinum (L.) Schrad., syn. *Lichen corallinus* L., *Pertusaria corallina* (L.) Arn.

Lichen "flock" *Stereocaulon (Schreb.)* Ach. (1794):
L. pascalis [sic] L., syn. *Stereocaulon paschale* (L.) Hoffm. (Lectotypus).

Stereocaulon (Schreb.) Hoffm. (1796, *nom. conserv. propos.*):
St. paschale (L.) Hoffm., syn. *Lichen paschalis* L. (following selection of Dodge, 1948; a suitable one in view of the fact that this species comprises part of the type elements of both *Stereocaulon* (Schreb.) Hoffm. and *Lichen* "flock" *Stereocaulon* (Schreb.) Ach.).

References

Acharius, E. 1794: Försök til en förbättrad Lafvarnes indelning (Dianome Lichenum). *Kgl. Vet.-Akad. Nya Handl.* 15: 237. (See page 258).

——, 1803: *Methodus qua omnes Detectos Lichenes .... redigere .... tentavit.* Stockholm. (See page 314).

Dodge, C. W., 1948: *Lichens and lichen parasites. British, Australian, New Zealand Antarct. Research Exped. 1929-1931, Repts. B, 7: 1.*

Hoffmann, G. F., 1789: *Descriptio et Adumbratio Plantarum .... quae Lichenes dicuntur.* Leipzig. (See page 25).

——, 1796: *Deutschlands Flora oder Botanisches Taschenbuch, zweyter Theil.* Erlangen. (See page 128).

Lamb, I. M., 1951: On the morphology, phylogeny, and taxonomy of the lichen genus *Stereocaulon. Canad. Journ. Bot.* 29: 522. (See page 558).

Schrader, H. A., 1794: *Spicilegium Florae Germanicae.* Hannover. (See page 113).

Schreber, C. D., 1791: *Linnaei Genera Plantarum,* ed. 8, 2. Frankfurt-am-Main. (See page 768).

I. Mackenzie Lamb

TYPIFICATION OF THE GENERA OF THE BAMBUSOIDEAE II.

Several comments pertinent to decisions presented in my earlier paper on this subject (Taxon 6: 199-210. 1957) are incorporated here, along with the mention of a new genus, Yushania Keng, f., recently added to the Bambusoideae.

Chimonobambusa Makino, Bot. Mag. Tokyo 28: 153. 1914; emend. Nakai, Journ. Arnold Arb. 6: 151. 1925.

Rehder's designation (Bibl. Cult. Trees & Shrubs, 1949, p. 639) of "Bambusa marmorea Mitf. = C. m. (Mitf.) Makino" as the "lectotypus" of this genus antedates my own (Taxon 6: 201. 1957).

Pseudosasa Makino ex Nakai, Journ. Arnold Arb. 6: 150. 1925; emend. Nakai, Fl. Sylvat. Koreana 20: 16-22. 1933.

Rehder's designation (Bibl. Cult. Trees & Shrubs, 1949, p. 637) of "Arundinaria japonica Steud.," (usually given as "A. japonica S. & Z.,") as the type species of this genus antedates my own (Taxon 6: 207. 1957). The full citation should read: Pseudosasa japonica (Steud.) Makino Journ. Jap. Bot. 2: 15. 1920 (Arundinaria japonica Sieb. & Zucc. ex Steud. Syn. Pl. Gram. 1: 334. 1855).

Sasa Makino & Shibata, Bot. Mag. Tokyo 15: 10. 1901.

Since the publication (Taxon 6: 208. 1957) of my selection of S. veitchii (Carr.) Rehder (S. albomarginata (Miquel) Makino & Shibata (l.c., p. 25, t. 1, f. 1-6) as the type species of this genus, it has come to my attention that Rehder (Bibl. Cult. Trees & Shrubs. 1949, p. 635) had already designated "Bambusa tessellata Munro = S[asa] tessellata (Munro) Mak. & Shib." as his "lectotypus." It appears that this is a case where the invocation of Article 4e, Appendix IV, ICBN. 1956, is in order. Bambusa tessellata Munro cannot have been the species, or even one of the species, Makino and Shibata had principally in mind when they defined the genus Sasa, for the character of the inflorescence of that species was not known to them. It is a species of which the flowering apparently has not been recorded, even yet.

As stated in my earlier paper (Taxon 6: 208. 1957) Makino and Shibata illustrated the diagnostic features of only two of the species included by them in their new genus: Sasa borealis and S. albomarginata — "the latter, more fully." Sasa borealis (Bambusa borealis Hackel) has since been transferred to the genus Sasamorpha by Nakai (Journ. Fac. Agr. Hokkaido Univ. 26: 181. 1931), and Sasa tessellata (Bambusa tessellata Munro) has been transferred to the same genus by Koidzumi (Acta Phytotax. et Geobot. 10: 75. 1941). From this, it appears that the pertinent taxonomic acts of Japanese botanists circumstantially, if not directly, support the judgment expressed in my earlier paper.

Sasamorpha Nakai, *in* Miyabe & Kudo, Journ. Fac. Agr. Hokkaido Univ. 25: 180. 1931. SPECIES TYPICA GENERIS, a Nakai (1931, p. 181) electa: S. borealis (Hackel) Nakai (Bambusa borealis Hackel, Bull. Herb. Boissier 7: 716. 1899). (cf. McClure, Taxon 6: 208. 1957).

As Hiyama points out (Journ. Jap. Bot. 28: 153. 1953) Matsumura's choice of the epithet *borealis* for the specific entity in which he united two simultaneously published species, Bambusa borealis Hackel and Arundinaria purpurascens Hackel (l.c., p. 720), under Sasa borealis (Hack.) Mak. & Shib. (Index Pl. Jap. 2: 96. 1905) cannot be superceded by Nakai's subsequent reversal of the choice (Bot. Mag. Tokyo 46: 41. 1932), making Bambusa *borealis* a variety of Sasamorpha purpurascens. (cf. ICBN, 1956: Art. 57.)

Yushania Keng f., Acta Phytotax. Sinica 6: 355. 1957. GENUS PRIMO MONOTYPICUM: species typica generis: Y. niitakayamensis (Hay.) Keng f. (Arundinaria niitakayamensis Hayata, Bot. Mag. Tokyo 21: 49. 1907).

F. A. McClure

Prof. Dr. ERICH WERDERMANN†

We regret to announce the death on 19 April 1959 of Prof. Dr. Erich Werdermann, formerly Director of the Botanical Garden at Berlin. Dr. Werdermann died at Bremen shortly after his return from a successful expedition to Africa. An appreciation and obituary will be published in a coming number of Taxon.

Dr. FREDERICO CARLOS HOEHNE†

We regret to announce the death on 16 March 1959 of Dr. Frederico Carlos Hoehne, formerly Director of the Botanical Institute of São Paulo and author of a great many papers on the flora of Brazil. Dr. Hoehne, who was born on 1 March 1882, was especially known for his work on the "Flora Brasilica"; he collected widely in all Brazilian states and his specimens are found in many herbaria all over the world.

NATIONAL SCIENCE FOUNDATION

The Division of Biological and Medical Sciences of the National Science Foundation announces that the next closing date for receipt of basic research proposals in the Life Sciences is September 15, 1959. Proposals received prior to that date will be reviewed at the fall meetings of the Foundation's advisory panels and disposition will be made approximately four months following the closing date. Proposals received after the September 15, 1959, closing date will be reviewed following the spring closing date of January 15, 1960.

Inquiries should be addressed to the National Science Foundation, Washington 25, D.C.

RACHEL M. M. HUNT BOTANICAL LIBRARY

The Carnegie Institute of Technology, has announced the appointment of George Hill Mathewson LAWRENCE as Director of the new Rachel McMasters Miller Hunt Botanical Library. The appointment will become effective in the Fall of 1960 when the library is expected to be completed.

Dr. Lawrence comes to Carnegie from Cornell University to direct this unique library which will be situated in a penthouse atop The Hunt Library. Both libraries were made possible through a gift of $ 2,800,000 from Mr. and Mrs. Roy A. Hunt last October. The penthouse library will house Mrs. Hunt's rare botanical collection acknowledged by experts to be one of high professional distinction. Its 2,000 titles include Incunabula, Herbals, Color Plate books, and an exceptional collection of botanical prints and original drawings and is particularly noteworthy for its collections of books published during the 16th, 17th, and 18th centuries.

NOTICES OF BOOKS

As the new periodical "Excerpta Botanica Sectio A" has now begun to appear (see TAXON, Vol. VIII no. 4), the editor of this column feels that it is no longer necessary to list in TAXON large numbers of taxonomic papers. As books and other separately published papers frequently come to the reviewers' attention considerably after their date of publication, the editor believes that a listing of such publications in the present column would still be useful. Readers of TAXON who disagree with this decision are urged to communicate with Dr. K. U. KRAMER, Botanical Museum, Lange Nieuwstraat 106, Utrecht, Netherlands.

Orchids of Peru

CH. SCHWEINFURTH: Orchids of Peru, Vol. 2. Publ. as Vol. 30, No. 2, of Fieldiana: Botany, Chicago Natural History Museum, March 1959. (pp. 261-531, frontispiece, fig. 46-102; deals with 12 genera. Price $ 4.50).

Lichens of North West Germany

C. F. E. ERICHSEN†: Flechtenflora von Nordwestdeutschland. Ed. by W. CHRISTIANSEN, O. KLEMENT, and W. SAXEN. G. Fischer Verlag, Stuttgart, 1957. (xxiv + 411 pp., 1 plate, 1 map; with keys, descriptions, and concise notes on ecology and geography. Price ca. 50 DM).

Diatoms of the Netherlands

A. VAN DER WERFF & H. HULS: Diatomeeënflora van Nederland. Vol. 2. Abcoude, Dec. 1958. (deals with 50 species; price Dfl. 4.50).

Bryaceae of Japan

H. OCHI: A. revision of the *Bryaceae* in Japan and the adjacent regions. Publ. by the Biol. Inst. Fac. Liberal Arts, Tottori Univ. 1959. (124 pp.; with keys, descriptions of little known or problematic species, citations of specimens, 32 figs. and 13 maps; to be ordered from the author, Biological Institute, Faculty of Liberal Arts, Tottori University, Tachikawa-cho, Tottori, Japan; price $ 1.65).

Taxonomy and Genetics of Oenothera

R. RUGGLES GATES: Taxonomy and genetics of *Oenothera*. Forty years study in the cytology and evolution of the *Onagraceae*. Den Haag, 1958. (116 pp., 20 figs.; deals with evolution, taxonomy, distribution, naturalization, genetics, and cytology; to be ordered from Martinus Nijhoff, P.O. Box 269, The Hague, Netherlands; price Dfl. 14.—).

POLLEN ET SPORES

On 1 May 1959 the Muséum National d'Histoire Naturelle at Paris published the first number of its new half-yearly journal "Pollen et Spores". This journal will publish original articles on as well as plates of photographs of spores and pollen grains as well

as bibliographical data. Editor-in-chief is Madame Madeleine VAN CAMPO, Laboratoire de Palynologie de l'Ecole Pratique des Hautes Etudes, 61, rue de Buffon, Paris V, France. A volume will consist of two numbers totalling approximately 250 pages and 20 plates. The subscription price is circa Fr. frs. 2300.— per volume.

INDEX KEWENSIS

Supplement XII

INDEX KEWENSIS PLANTARUM PHANEROGAMARUM Supplementum duodecimum. Nomina et synonyma omnium generum et specierum ab initio anni MDCCCCLI usque ad finem anni MDCCCCLV non nulla etiam antea edita complectens. Ductu et consilio Georgii Taylor confecerunt herbarii horti regii botanici Kewensis curatores.

Oxford University Press, 30 April 1959, Sh 75/— net.

The publication of this twelfth supplement to the *Index Kewensis*, undoubtedly our most important single tool in the systematic botany of the phanerogams, will be warmly welcomed all over the world. Taxonomic botany owes a great debt to the Kew Herbarium for the preparation of this work and for the continued care in editing supplements. The amount of work involved in such a compilation is so great that it is with the greatest respect and with feelings of deep gratitude that we realize that it is still being done, and being done in such an excellent way, by one single taxonomic institute. Similar enterprises are nowadays usually dependent on international funds, and the continuation of this publication is therefore a tribute not only to the Kew staff but also to the British government, which thus performs such an important service to botany as a whole.

F. A. S.

PHYTOGEOGRAPHIC SURVEY OF NORTH AMERICA

HARSHBERGER, JOHN W. — Phytogeographic survey of North America. A consideration of the Phytogeography of the North American continent, including Mexico, Central America and the West Indies, together with the Evolution of North American Plant Distribution.

Second (reprint) edition, published by H. R. Engelmann (J. Cramer) Weinheim/Bergstr. Germany and the Hafner Publishing Company, New York. 800 pp., 32 figs., 18 pls., 1 map. $ 21.—.

WILLIS — DICTIONARY

A new edition of Willis's *Dictionary of Flowering Plants and Ferns* (last ed. 1931) is in preparation at the Royal Botanic Gardens, Kew.

It would be greatly appreciated if all botanists who are in a position to do so would co-operate in this work by supplying up-to-date estimates of *total number of species* and *geographical distribution* of *any* genera (large or small) to which they may have given special attention.

Such estimates should be addressed to: Mr. H. K. Airy Shaw, Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey, England, where they will be very gratefully received.

KARL P. SCHMIDT FUND

The Karl P. Schmidt Fund has modest sums available to assist persons wishing to study at the Chicago Natural History Museum. Grants will be made for study in any of the four fields encompassed by the museum: anthropology (with a natural history orientation), botany, geology (including paleontology), and zoology. An applicant should describe the study proposed in brief terms, state the length of time he wishes to study at the museum and the amount of money needed, and name one reference.

Applications should be mailed to: Chairman, The Karl P. Schmidt Fund, c/o Chicago Natural History Museum, Roosevelt Road and Lake Shore Drive, Chicago 5, Illinois.

KEW BULLETIN

The library of the Director of Forest Research, Private Mail Bag no. 5054, Ibadan, Nigeria has available spare copies of certain parts of the Kew Bulletin from as far back as 1906. The librarian would be glad to exchange these for other botanical books and periodicals, and in particular he is very anxious to obtain the following numbers of the Kew Bulletin:

1887 — No. 3, 4, 5 and 12.
1888 — Nos. 15, 18, 23 and 24.
1889 — Nos. 27, 30, 31, 34 and 36.
1890 — Nos. 38, 39, 42, 43, 47 and 48.
1891 — Nos. 50, 53, 54 and 60.
1892 — Nos. 62 and 64.
1935 — No. 4.
1940 — Nos. 1 and 6.

Office

The International Bureau for Plant Taxonomy and Nomenclature, 106 Lange Nieuwstraat, Utrecht — Netherlands.

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Vol. 1, nos. 1-9, 1951-1952.
Incomplete copies consisting of nos. 1, 2, 5, 6, 7, 8 & 9 $ 2.—.
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Vol. 2, nos. 1-8, 1953.
Complete copies (8 nos.) $ 3.—.
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Vol. 3, nos. 1-9, 1954.
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Single numbers of nos. 1, 4, 6, 7, 8 or 9 $ 0.35 per number.

Vol. 4, nos. 1-9, 1955.
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Vol. 5, nos. 1-9, 1956.
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Vol. 6, nos. 1-9, 1957.
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Single numbers of each issue $ 0.35 per number.

Vol. 7, nos. 1-9, 1958.
Complete copies (9 nos.) $ 3.—.
Single numbers of each issue $ 0.35 per number.

Membership Fees

Members are requested to pay their membership fees to the regional treasurers.

Members in countries without regional treasurers are requested to make payable their subscriptions to *Messrs Vlaer & Kol, Utrecht, Netherlands,* crossed: *"a.c. International Bureau for Plant Taxonomy".*

A. Individual Persons	$	£	D.fl.	Sw.Kr.
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NOMINA GENERICA CONSERVANDA ET REJICIENDA SPERMATOPHYTORUM

H. W. Rickett (New York) and F. A. Stafleu (Utrecht)

Pages 220-279 of the *International Code of Botanical Nomenclature* (1956) are occupied by a list of conserved and rejected names of genera of *Spermatophyta*. The origins and history of conservation have been discussed by Stafleu (Taxon 5: 85-95). As a result of his study it became evident that the list is no longer in harmony with current concepts of nomenclature and the rules for maintaining them. The desirability of a general revision of the list is obvious; such a revision was begun by Stafleu several years ago. It proved, however, an impossible task for one person to achieve in the intervals between ordinary duties. Consequently application was made by The International Association for Plant Taxonomy to the National Science Foundation (Washington) for a grant in furtherance of this project. The grant was awarded early in 1958, enabling the present authors to work together for some seven weeks in Holland and England, principally in the Institute of Systematic Botany of the University of Utrecht and the Botany Department of the British Museum (Natural History). During this period we completed the verification (begun by Stafleu alone) of almost every citation in the list, and the evaluation of every conservation and rejection in the light of the current rules of nomenclature. The final manuscript was prepared later, in Utrecht and New York; an additional conference of the authors was made possible by Stafleu's visit to the United States in December, 1958.

A proposal has been presented to the Ninth International Botanical Congress, to be held at Montreal in 1959, to replace the current list of conserved and rejected names of genera of *Spermatophyta* by a new list based on that which follows (see Synopsis of Proposals, Regnum Vegetabile 14: 79. 1959).

Our sincere thanks are due to the officers and botanists of the several institutions whose facilities and cooperation we have enjoyed, particularly to the following:

Dr. J. Lanjouw, Director, Institute of Systematic Botany, University of Utrecht.
Dr. J. J. Swart, of the same Institute.
Dr. H. J. Lam, Rijksherbarium, Leiden.
Dr. R. Lorentz, Librarian, Teyler's Stichting, Haarlem.

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Mr. J. S. L. Gilmour, Director, University Botanic Garden, Cambridge.
Mr. J. E. Dandy, Head, Botany Department, British Museum (Natural History).
Mr. W. T. Stearn, of the same institution.
Mr. R. Ross, of the same institution.
Miss P. Edwards, Librarian, Botany Department, British Museum (Natural History).
Dr. G. Taylor, Director, Royal Botanic Gardens, Kew.
Mr. Ch. E. Hubbard, Keeper of the Herbarium, Royal Botanic Gardens, Kew.
Mr. V. S. Summerhayes, The Herbarium, Royal Botanic Gardens, Kew.
Mr. A. A. Bullock, of the same institution.
Mr. N. Y. Sandwith, of the same institution.
Dr. H. E. Moore, Bailey Hortorium, Ithaca.
Dr. R. C. Rollins, Director, Gray Herbarium, Harvard University, Cambridge, Mass.
Dr. A. C. Smith, Director, Natural History Museum, U.S. National Museum, Washington.
Mrs. L. Schwarten, Librarian, Harvard University Herbarium.
Miss E. Hall, The New York Botanical Garden.
Dr. R. S. Cowan, Department of Botany, U.S. National Museum, Smithsonian Institution, Washington.

Although several of the reasons for the changes that we propose in this publication have already been discussed at some length in the paper by Stafleu mentioned above, we are of the opinion that a fuller survey should be given here. The remainder of this introduction is devoted to this survey.

1. Errors and Mistakes

The list of *nomina conservanda et rejicienda* for Spermatophyta that now appears in the *Code* was started by the Vienna congress of 1905. Since then it has been reprinted again and again (four editions of the *Rules* and two of the *Code*), and it is understandable that in this repeated reprinting several mistakes have crept in: erroneous citations, changes of spelling, etc. We realize that our list also contains such mistakes, but we hope to have eliminated more old ones than we have made new ones. In works such as this ultimate precision is hypothetical only. Another item, which may be of lesser interest, is the inconsistency in the use of certain abbreviations of titles and the like to which various authors have drawn our attention. We have tried to bring the list into accord with the rules and recommendations also in this respect, and particularly to make it consistent within itself.

2. The Effect of Changes in the Rules

It is well known that the rules of nomenclature have been repeatedly changed since the Vienna congress. This continual changing can be attributed only partly to a certain wilfulness on the part of nomenclatural legislators. Most of the changes, including all the important ones, have been a direct result of the development of scientific plant taxonomy and of the growing tendency among all taxonomists to adhere to some one system of nomenclature rather than to competing systems or to no system at all. The number of taxonomists who now consistently ignore the international rules is very small. The result of these tendencies has been that a growing number of taxonomists have been actively engaged in perfecting the rules and in regulating our use of historical works, rather than adhering simply to unwritten tradition.

A few examples will illustrate this development.

a. *The Absolute Homonym Rule.* Before the Cambridge congress of 1930 it was possible to use a later homonym if the earlier one was illegitimate. This rule worked

quite well in the nineteenth century, but in the twentieth a growing group of taxonomists became opposed to it. If they had adhered strictly to the requirement of "illegitimacy" for the earlier homonym, all would perhaps have gone well. This, however, was impossible, since no sharp distinction was made at that time between "correct" and "legitimate". Many earlier homonyms that were legitimate but later taxonomic synonyms were regarded as no obstacle to the use of a later homonym; it is clear that confusion was inevitable, because the decision whether or not a later homonym was available became taxonomic (subjective) rather than objective. The rule "once a homonym always a homonym" or rather "once a later homonym, always illegitimate" (except for conservation) was adopted at Cambridge in 1930; this put an end to what had become a very confused situation.

One of the results of this decision, however, was that many names that were in common use appeared to be later and therefore illegitimate homonyms. It was the express understanding at the Cambridge congress that such cases should be dealt with by conservation, and an impressive number of *nomina conservanda* was added to the list (see Kew Bull. 1935: 341-544).

Another, more unexpected result of the adoption of the absolute homonym rule was that several conservations made in the past now became superfluous. Under the old system a name that was a later homonym might be available to replace a well-known but later taxonomic synonym; the well-known name could be saved only by conservation. After 1930 the competing name would be illegitimate anyhow because of the earlier homonym. Examples of this sort of superfluous conservation are:

3050 *Dontostemon*, 3122 *Caylusea*, 3753 *Clianthus*, 3810 *Alysicarpus*, 4077 *Toddalia*, 5600 *Agonis*, 5259 *Amphirrox*.

An equally unexpected result of the introduction of the absolute homonym rule was that by the above-mentioned stream of new *nomina conservanda* a number of names were declared illegitimate that had hitherto been legitimate and that had competed with well-known other names for which conservation had been invoked. Such conservations now became superfluous. [It should be pointed out that a name rejected in favour of a later homonym becomes illegitimate (unavailable) under the *Code*, since distinct taxa cannot bear the same name. It can never replace any other name. See also 4a below.]

An example of such a chain of events is the following: The name 4297 *Securinega* Commerson ex A. L. Jussieu (1789) is conserved over its *taxonomic synonym Acidoton* P. Browne (1756). *Securinega* is a legitimate name but when it competes with the earlier *Acidoton* the former would be the correct name for the taxon. Later, however, 4415 *Acidoton* Swartz (1788) was conserved over its earlier homonym *Acidoton* P. Browne (1756). This means that the latter is no longer available to replace *Securinega* and that this name stands without conservation.

The case of 5528 *Weihea* is slightly different. This name was conserved over *Richaeia* Thouars (1806) for which it was an avowed synonym. *Weihea* was illegitimate on publication since *Richaeia* itself was legitimate. The conservation of 6254 *Richea* R. Brown (1810) over *Richaeia* Thouars (1806) makes the latter illegitimate, but this does not mean that *Weihea* is now available without conservation. *Weihea* was (Art. 64) "nomenclaturally superfluous *when published*" (italic ours), and cannot be used without conservation. Notwithstanding the absence of an earlier competing name, therefore, the conservation of *Weihea* remains necessary.

b. *Descriptio generico-specifica.* Before the Cambridge congress it was not possible to accept as validly published names provided with a combined generic and specific description. It was on this account perhaps that several generic names pub-

lished by P. Browne in 1756, even those that were monotypic, were considered to be not validly published. After 1930 this was no longer true, and such publication was treated as valid (as had been done in the past by tradition).

c. *The Kew Rule.* The type species of many names in the present list carry names different from those hitherto adopted. The principal reason for this is that an astonishingly large number of cases of continuance of the "Kew rule" came to light. Under this rule no epithet had priority outside its combination with a generic name. If a species was transferred from one genus to another, its epithet was not necessarily retained but was often replaced by a new one. Such new epithets are now illegitimate; Art. 55 says expressly that the original epithet, if legitimate, must be retained (with certain exceptions).

The original Kew rule had an even wider scope: no name or epithet had priority outside its own rank (still our present Art. 60), neither had any epithet priority outside its "own combination" (that is, e.g. under another generic name). Art. 60 is what remains of the Kew rule, and this last remnant is also weakened by such provisions as Art. 27, under which the use of the same epithet for two infraspecific taxa within the same species "*even if they are of different rank*" is prohibited. A similar provision exists for infrageneric taxa (Art. 21), and a proposal not unlike this has been put forward for family names and for names of taxa between family and genus in rank.

d. *The Type Method.* The introduction of the type method has had many consequences for the list of *nomina conservanda.* Under the present rules it is sufficient — indeed mandatory — to conserve a generic name with a given type-species; no indication of the circumscription is necessary or even desirable. Each individual taxonomist is free to decide what circumscription to adopt. The list of *nomina rejicienda* contains names that must be rejected in case an author uses the conserved name with such a circumscription that it competes with certain other names based on different types.

In the old rules the names were conserved for a given circumscription. This made the citations sometimes long and complicated (see e.g. 1482 *Epipactis*, 1393A *Paphiopedilum*, 1614 *Epidendrum*, 2513 *Nymphaea*), and in other cases it resulted in conserving a name under a later author (e.g. 9592 *Taraxacum*). This procedure amounted to the creation of a later homonym under the old rules, this is no longer necessary provided the conserved type-species was among the original species of the first author. This is the reason that for a large number of names it is now possible to give the first author who used the name with the conserved type.

A consequence of the type method is that several conservations that were made to preserve a certain circumscription are now maintained to conserve a certain choice of type. In such cases there is no need to mention any *nomina rejicienda* because none would be earlier than the conserved name. [See also 6 (5) below.]

3. The effect of new information

In this revision much new information has been incorporated in the list. Some of this had already been published elsewhere, some was sent to us by colleagues, and the remainder was found by us during our work. It is impossible to mention by name every primary source of our information, but wherever it came from, it has been verified by us unless it is otherwise stated.

A few examples of such changes follow.

a. Earlier publications of conserved and rejected names have been established. Several books appear to have been overlooked: e.g. Philip Miller's *Gardeners*

Dictionary, Abridged edition 4 (1754), contains many names which were cited as of a later date, and this notwithstanding the circumstance that Druce had in the beginning of this century pointed out the importance of this book and that several of the names were listed as of Miller in the fifth supplement to the *Index kewensis*. J. G. Zinn's *Catalogus plantarum horti academici et agri gottingensis* (1757) is another example of an overlooked book that contains much information that tends to stabilize non-Linnaean (1753) names that were conserved. The overflow from the pre-1753 period is most manifest in these publications, but is also noticeable in a host of smaller works to which Rothmaler, for example, has drawn attention (Repert. Sp. Nov. 53: 1. 1944). Many names hitherto attributed to Adanson will also be found in the works of Miller, Zinn, Boehmer, and others.

In general our bibliographic work has resulted in the discovery of more facts that have a stabilizing influence than those that have a disturbing one. It is often said that the digging up of old books has disastrous results for well-known names. This has certainly been true for many names, but it may also be pointed out that, in this revision at any rate, such work has shown that many well-known names are older than has been generally assumed, and are thus often safeguarded against obscure synonyms. *Taraxacum* Zinn (1757), for instance, has no competing earlier synonyms, as far as we know.

b. *Precise Dates of Publication.* It is becoming clear that it is often necessary to verify the dates of publication given on title-pages. It is also often necessary to have precise information on the actual date (day, month) of publication. Much bibliographic search of this kind has been made in recent years. Some of the results are summarized by Mrs. van Steenis-Kruseman and Mr. William T. Stearn in *Flora malesiana* (ser. 1. 4 (5). 1954). In the bibliography that follows the present list we refer often to this work, and to other publications of a like nature. The dates shown in our list of *nomina conservanda* agree with those in our bibliography, and when conclusions are based on more detailed information about dates, this will be found in the bibliography and is not repeated under each conserved name.

c. *Application of the Code.* Several *nomina rejicienda* appeared to be *nomina nuda*, vernacular names, names published in other ranks, names based on totally different types, often in quite different families. The elimination of these names simplifies many of the cases and has the effect of making a number of conservations superfluous (e.g. 2202 *Fagopyrum* P. Miller; 1901 *Zelkova* Spach).

4. The Status of Nomina Rejicienda

The meaning of "rejected" as applied in nomenclature is unfortunately open to some misunderstanding. The phrase *nomina rejicienda* — "names to be rejected" — has here and where it is generally used a special meaning: names to be rejected because of the conservation of another name based on the same type, of another name for the taxon, or of a later homonym. Except for conservation, *nomina rejicienda* are in accord with the rules and would be maintained in use. But "rejection" appears in the *Code* also in another way. Section 6 (Articles 62-72) treats of the rejection of names that are *not* in accord with the rules, in other words that are illegitimate. (Names that are not validly published are, according to Art. 6, not names; they have no nomenclatural status and the question of "rejection" does not arise for them.)

The status of *nomina conservanda* is explained in Art. 13. That of *nomina rejicienda* is nowhere explicitly treated, but is implicit in various provisions of the *Code*. The following statements seem to us to follow from the interpretation of the rules.

[They apply only to names of taxa in categories subject to conservation, i.e., according to the current *Code*, to "genera, families, orders, and intermediate taxa" (Art. 14).]

a. All earlier homonyms of a conserved name, as well as later homonyms, are illegitimate. It is true that it is nowhere stated, as it was in older codes of nomenclature, that more than one taxon cannot bear the same name; but this is certainly implicit in Art. 64 (2). It would be of advantage for this to be more clearly stated in the *Code*, e.g. by a second note under Art. 64 (2) reading: "Earlier homonyms of conserved names are always illegitimate".

b. All names based on the same type as that of a conserved name (nomenclatural synonyms) are illegitimate. This follows from Principle IV and Art. 7. A taxon can bear only one correct name, the application of which is determined by its nomenclatural type. *Sparmannia* Buchoz (1779) is illegitimate for this reason, since the conserved name 7592 *Rehmannia* is based on the same type. *Sparmannia* Buchoz is illegitimate also as being an earlier homonym of a conserved name (4957 *Sparmannia* Linnaeus fil.).

c. Names based on different types from that of the conserved name but considered to be synonymous (taxonomic synonyms) are not, *ipso facto*, illegitimate. Here the question arises of the exact meaning of Art. 14 Note 3. This has been fully discussed by Stafleu (Taxon 5: 89, 90) and by Rickett and Stafleu (Taxon 7: 153); it is sufficient here to point out that the Note as it appears in the current *Code* is a relic of "circumscription" as a means of applying names, and that proposals to be presented at the Montreal congress seek to modify it in accord with the type method. Assuming that such a clarification is effected, the choice of a taxonomic synonym as a correct name, unless it is listed as a *nomen rejiciendum*, depends wholly on taxonomic judgment, and is not determined by conservation. If a taxon that bears a conserved name is united with another which bears a legitimate name of its own not listed as a *nomen rejiciendum*, the two names compete without regard to conservation. A name listed as a *nomen rejiciendum* in favor of a conserved name, but based on a different type, is still available when the corresponding taxon is regarded as distinct from that which bears the conserved name (Art. 14 Note 4). Examples are found under Art. 14 Notes 3 and 4 in the *Code*. (See also 6 (3) below.)

d. By Art. 64 (2) a later homonym is unavailable even if an earlier homonym is "illegitimate, or is generally treated as a synonym on taxonomic grounds." Conservation, therefore, against a nomenclatural or taxonomic synonym that is itself a later homonym is superfluous (see 2a above), and cannot affect the status of the earlier homonym(s) involved. Examples may be found under 2163 *Helosia*, 2261 *Suaeda*, 7810 *Didymocarpus*.

5. Inclusion of Rejected Names in the List

In making the revision that follows we have followed the policy of the committees for Spermatophyta appointed at the Stockholm and Paris congresses (1950, 1954) in the listing of *nomina rejicienda:* only those names should be mentioned that have a real effect on the conservation in question. We have extended this general policy so that we cite only those earlier names that could replace or render illegitimate the conserved name if this were not conserved. When conservation was effected solely for lectotypification, or when the name to be conserved is illegitimate but has no name to replace it, we do not cite *nomina rejicienda*. A large number of names now in the list of *nomina rejicienda* have no bearing at all on the use of the corresponding conserved names, and citation of them makes the cases concerned less clear at first sight.

We have accordingly limited citation of *nomina rejicienda* to the following:

1. The earlier legitimate nomenclatural synonyms if available (≡).
2. The *first* earlier homonym (H).
3. Earlier taxonomic synonyms the rejection of which has been authorized by a congress (=).
4. The original spelling (first orthographic variant based on the same type) if it has priority over the conserved spelling (V).

We have excluded from listed *nomina rejicienda* the following:

1. Illegitimate earlier nomenclatural synonyms. These names, being illegitimate, can never replace the conserved name even if it were not conserved.
2. Earlier homonyms that are themselves illegitimate because of a still earlier homonym (the first). (All earlier homonyms are, by Art. 14 Note 5, automatically rejected.)
3. Illegitimate earlier taxonomic synonyms.
4. Orthographic variants other than the original spelling.

Note: No name of the kind designated in the above paragraphs 1-4 could replace the conserved name, since these were already illegitimate before conservation became effective. They are discussed in notes under each case, but we propose that these notes be omitted from the list when it is incorporated in future editions of the *Code*.

5. Names that had not been validly published (according to current rules) before the date of the conserved name. Many of these may have satisfied the requirements for publication of earlier codes of nomenclature.
6. Names that have no priority over the conserved name. Some of these would replace the conserved name if this were not conserved. For the case as given, in which the name *is* conserved, they are of no importance.

6. The Uses of Conservation

It is not always realized that conservation has not always been used simply to protect a name against falling into the synonymy of an earlier name or because of the existence of an earlier homonym.

Conservation serves many purposes and it is doubtless because of this great flexibility that it has proved useful. Although some may still consider it the chamber of horrors of nomenclature, it may well be said that, since expediency and the maintenance of established custom are our all-important overriding principles, conservation is one of the most useful of our nomenclatural devices.

Conservation has been invoked for the following reasons:

1. To protect a name against an earlier homonym. Conservation has the effect of giving the illegitimate later homonym the standing of a legitimate name. The earlier homonym in its turn becomes illegitimate through this action (if this was not already the case), and is indicated in our list by (H).

Example: 6045 *Polemannia* Ecklon et Zeyher (1837) vs. *Polemannia* Bergius (1826).

2. To conserve (that is, to make legitimate) a name that was illegitimate on publication because of the existence of an earlier nomenclatural synonym. In other words, the type-species of that name is also the type-species of another, earlier name

that is in accord with the rules. The earlier name is marked in our list with an identity sign (≡).

Example: 6064 *Kundmannia* Scopoli (1777) is conserved over *Arduina* Adanson (1763), both being based on *Sium siculum* Linnaeus.

3. To protect a legitimate name against falling into the synonymy of an earlier taxonomic synonym when the correct name has to be established. The two competing names are based on different types and may both be legitimate. If thought to be applicable to different taxa of generic rank, both are available. It is only when, on taxonomic grounds, both names are regarded as applying to one taxon of a given circumscription that only one of them can be the correct name. In such cases conservation serves to protect the well-known but later name from becoming incorrect. It would never have been illegitimate, neither does the rejected taxonomic synonym become illegitimate on this account: it becomes obligatorily incorrect in case of union of the two taxa.

Example: 6291 *Labisia* Lindley (1845), when considered to be congeneric with *Angiopetalum* Reinwardt (1826) must be retained for the combined taxon. If thought to refer to different genera, both names are available. (See also 4c above).

4. To declare legitimate a name that is illegitimate under the rules but for which there is neither an earlier available name, nor an earlier homonym.

Example: 2988 *Neslia* Desvaux was (on publication) a superfluous name for *Rapistrum* Haller (1768). The circumstance that the latter is no longer available because of the conservation of *Rapistrum* Crantz (1769) does not automatically obviate the necessity of conserving *Neslia*. The latter was illegitimate *on publication* and can be made available only by conservation. The later conservation of *Rapistrum* Crantz has no effect whatever upon the status of *Neslia*, because Art. 64 (1) expressly states that a name is illegitimate "if it was nomenclaturally superfluous when published".

5. To retain a certain choice of type. This is indicated in our list by the words *typ. cons.* (*typus conservandus*). A name originally published with several species but without clear indication of a holotype may have been lectotypified in different ways by later authors. If it is desirable to retain a later choice, this can be done by conservation. The conserved name may be legitimate even without conservation. (See 2d above.)

Example: 2513 *Nymphaea* Linnaeus (1753) could be typified in various ways. The conserved lectotype is *Nymphaea alba*, a species that was not chosen by the first author to lectotypify the genus (Salisbury in 1805 chose *Nymphaea lutea*) but by a later one (J. E. Smith in 1809).

6. To retain a name with a type different from that chosen by the original author, or with a type that was not even included in the original author's circumscription. In the latter case this action amounts to conservation of a later homonym, although it is often simply the conservation of a misapplication.

Examples: 2035 *Protea* R. Brown was a misapplication of the name *Protea* Linnaeus (1753), for Brown excluded all species that had been included in 1753 but included some added by Linnaeus in 1771. The genus could not be conserved as from 1771 because Linnaeus did not provide a new diagnosis in that publication. It could be argued, however, that the genus should have been conserved as *Protea* Murray (1774). This author adopted the widest circumscription given by Linnaeus (1771) and provided a diagnosis. The misapplication by Brown in 1810, however, is current usage, *Protea argentea* Linnaeus (type of *Protea* Linnaeus, 1753) being excluded, and *Leucadendron cynaroides* Linnaeus (the chosen type) included. Linnaeus himself had changed the circumscription of his genus *Protea* in 1753. Brown took up the usage by Linnaeus before 1753.

6277 *Galax* Linnaeus (1753) is conserved with the type *Galax aphylla* Linnaeus. The historical type of Linnaeus was a quite different species.

471a *Bulbostylis* Kunth is conserved in spite of the fact that Kunth did not propose a new name: he merely emended Steven's genus *Bulbostylis*, but later it became clear that the two concepts were often treated as different genera. The usage of Kunth was conserved, and therefore a later homonym was artificially created.

7. To make sure that a name will be retained whose exact date of publication cannot be established. The competing names may be either earlier or later, but which is true cannot be said with certainty. In this way the conservation arbitrarily assumes that the rejected names are earlier. This should on no account be interpreted as an official decision on the dates of the books themselves. It is simply an arbitrary decision for each particular case. Conservation here declares a name legitimate (or correct) when its exact status is uncertain.

Examples: 1449 *Pterostylis* R. Brown (Mar 1810) is conserved over (=) *Diplodium* Swartz (1810; month unknown). It is possible that the later name is earlier and the conservation serves to maintain *Pterostylis* in case the genera are united and the publication by Swartz should be proved to be earlier than March.

2432 *Moenchia* Ehrhart (1788 trim 2?) is conserved over *Moenchia* Roth (1788 "prim"). It is probable that Roth's publication was the earlier (the preface was dated 21 Jan., Ehrhart's preface 8 Apr.), but this is not certain.

8. To preserve a later spelling of a name. Such cases are indicated in our list by *orth. cons.* (*orthographia conservanda*). It is only rarely that conservation has been effected for this purpose alone, but a later but better-known spelling has often been chosen for a name conserved for other reasons. It should be pointed out here that in such cases the conserved name dates from its original publication with the original spelling. The rejected original orthography is indicated in our list by (V) (variant spelling); other rejected orthographies may be indicated in the text by *orth. rej.* It is not always sure that the "correction" as conserved was in agreement with the intention of the original author. Still, if the correcting author duly attributes the name to the original author, but effects without comment an orthographical change, it would be incorrect to attribute the name to the correcting author.

Examples: 739 *Philodendron* Schott (1829) ('*Philodendrum*'), corr. Schott 1832 (*orth. cons.*); 1265 *Moraea* P. Miller (1758) ('*Morea*'), corr. Linnaeus 1762 (*orth. cons.*); 1502 *Zeuxine* Lindley (1826) ('*Zeuxina*'), corr. Roeper 1827 (*orth. cons.*).

2314 *Pupalia* A. L. Jussieu (1803) is probably simply a later variant of *Pupal* Adanson (1763). However, since Jussieu did not mention Adanson, it is better to continue to attribute *Pupalia* to Jussieu.

9. To enforce the application of Art. 75 and its note. When two generic names, based on different types, are very much alike, it is always difficult to know whether Art. 75 applies or not; that is, whether "they are to be treated as variants, which are homonyms". The footnote says that when there is doubt, the names should be referred to the General Committee. In practice this has hitherto meant that one of them was conserved and the other rejected as a "homonym". Art. 75 gives little guidance in this matter: the deciding principle seems to be the danger of confusion. Since this is generally a matter of opinion, a decision by a committee is needed to settle such cases.

Examples: 968 *Burchardia* R. Brown (1810), *nom. cons.* vs. *Burcardia* Duhamel (1755); 1077 *Lloydia* H. G. L. Reichenbach (1830), *nom. cons.* vs. *Lioydia* Necker (1790); 1178 *Vallota* Herbert (1821), *nom. cons.* vs. *Valota* Adanson (1763); "post" 1834a *Symphyglossum* Schlechter (1919), *nom. cons.* vs. *Symphyoglossum* Turczaninow (1849); 3022 *Lepidostemon* J. D. Hooker et Thomson (1861) (Crucif.), *nom. cons.* vs. *Lepistemon* Blume (1825) (Convolv.).

10. To protect a name from competition with an earlier homonym or synonym whose publication is of doubtful validity.

Example: 1208 *Hippeastrum* Herbert (1821) is conserved over *Leopoldia* Herbert (1821). The latter name is of doubtful validity but would displace *Hippeastrum* Herbert if accepted as validly published. (See Taxon 7: 185. 1958; this case is not yet included in the present list because no decision had been taken by the time of printing the "Paris Code").

11. To conserve a choice between names published in the same book or article. Since "page-priority" or other "mechanical" systems are not accepted in establishing types or priority, it may be necessary in rare cases to conserve an arbitrary choice.

Example: When 134 *Chrysopogon* Trinius, Fund. Agrost. 187 (1820) and *Centrophorum* Trinius, l.c. 106 are united, the former, being conserved, is to be retained.

CYCADACEAE

7. **Zamia** Linnaeus, Sp. Pl. ed. 2. 1659. Jul 1763.
T.: *Z. pumila* Linnaeus.

(≡) *Palma-Filix* Adanson, Fam. **2**: 21, 587. 1763 prim.
LT.: *Zamia pumila* Linnaeus (vide Florin, Taxon **5**: 189. 1956).

TAXACEAE

13. **Podocarpus** L'Héritier ex Persoon, Syn. Pl. **2**: 580. 1807.
T.: *P. elongatus* (W. Aiton) L'Héritier ex Persoon (*Taxus elongata* W. Aiton) (*typ. cons.*).

(H) *Podocarpus* Labillardière, Nov. Holl. Pl. Spec. **2**: 71. *t. 221.* 1806 [PODOC.].
≡ *Phyllocladus* L. C. Richard 1826 (*nom. cons.*) (15).
(=) *Nageia* J. Gaertner, Fruct. **1**: 191. 1788.
T.: *N. japonica* J. Gaertner.

15. **Phyllocladus** L. C. Richard, Comm. Bot. Conif. Cycad. 129. 1826.
T.: *P. rhomboidalis* L. C. Richard, nom. illeg. [*Podocarpus aspleniifolia* Labillardière, *Phyllocladus asplenii-folius* (Labillardière) J. D. Hooker].

(=) *Podocarpus* Labillardière, Nov. Holl. Pl. Spec. **2**: 71. *t. 221.* 1806.
nom. rej. vs. *Podocarpus* Persoon 1807 (*nom. cons.*) (13).

Note: (≡) *Thalamia* C. Sprengel, Anleit. ed. 2. **2**: 218 (1817), is a superfluous name for *Podocarpus* Labillardière (1806); the latter is not now available, but conservation of *Phyllocladus* L. C. Richard remains necessary because it was superfluous on publication.

17. **Torreya** Arnott, Ann. Mag. Nat. Hist. **1**: 130. Apr 1838.
T.: *T. taxifolia* Arnott.

(H) *Torreya* Rafinesque, Am. Mon. Mag. Crit. Rev. **3**: 356. Sep 1818 [LABIAT.].
T.: *T. grandiflora* Rafinesque.

Note: Other homonyms: *Torreya* Rafinesque, Journ. Phys. Chim. Hist. Nat. Arts **89**: 105 (1819) [CYPER.], C. Sprengel, Neue Entd. **2**: 121 (1821) [VERBEN.], A. Eaton, Man. Bot. ed. 5. 420 (1829) [LOASAC.].

PINACEAE

† 20. **Agathis** R. A. Salisbury, Trans. Linn. Soc. **8**: 311. 1807.
T.: *A. loranthifolia* R. A. Salisbury, nom. illeg. [*Pinus dammara* A. B. Lambert, *Agathis dammara* (A. B. Lambert) L. C. Richard].

Note: Conservation superfluous, (=) *Dammara* Lamarck, Enc. **2**: 259 (1786), was not validly published; its date of valid publication is 1822 (by Link) (non *Dammara* J. Gaertner, Fruct. **2**: 100 (1791) [BURSER.]) (see also Bakhuizen van den Brink, Taxon **4**: 195. 1955).

23. **Cedrus** Trew, Cedr. Lib. Hist. **1**: 6. 1757.
T.: *C. libani* A. Richard, Dict. Class. Hist. Nat. **3**: 299. 1823 (*Pinus cedrus* Linnaeus).
(H) *Cedrus* Duhamel, Traité Arb. Arbust. **1**: xxviii, 139. *t.* 52. 1755 [CUPRESS.].

31. **Cunninghamia** R. Brown in L. C. Richard, Comm. Bot. Conif. Cycad. 149. 1826.
T.: *C. sinensis* R. Brown, nom. illeg. [*Pinus lanceolata* A. B. Lambert, *C. lanceolata* (A. B. Lambert) W. J. Hooker].
(H) *Cunninghamia* Schreber, Gen. 789. 1791 [RUBIAC.].
≡ *Malanea* Aublet 1775.
(≡) *Belis* R. A. Salisbury, Trans. Linn. Soc. **8**: 315. 1807.

† 32. **Sequoia** Endlicher, Syn. Conif. 197. 1847.
T.: *S. sempervirens* (D. Don) Endlicher (*Taxodium sempervirens* D. Don).

Note: Conservation superfluous. *Steinhauera* K. B. Presl in Sternberg, Fl. Vorw. **2**: 202. *t. 49*, 57 (1838), cannot replace *Sequoia* Endlicher when the two genera are united, because of Art. 58. See also H. Tate Ames et al., Taxon **7**: 227 (1958).

WELWITSCHIACEAE

48. **Welwitschia** J. D. Hooker, Gard. Chron. **1862**: 71. 25 Jan 1862.
T.: *W. mirabilis* J. D. Hooker.
(H) *Welwitschia* H. G. L. Reichenbach, Handb. 194. 1837 [POLEMON.].
(≡) *Tumboa* Welwitsch, Gard. Chron. **1861**: 74. Jan 1861.

POTAMOGETONACEAE

57. **Posidonia** C. Konig, Ann. Bot. Konig & Sims **2**: 95. Jun 1805 ('1806').
T.: *P. caulini* Konig, nom. illeg. [*Zostera oceanica* Linnaeus, *P. oceanica* (Linnaeus) Delile].
(=) *Alga* Boehmer in Ludwig, Def. Gen. Pl. 503. 1760.

Note: ≡ *Caulinia* A. P. Decandolle in Lamarck et Decandolle, Fl. Franç. ed. 3. **3**: 156 (1805), is a later homonym of *Caulinia* Willdenow, Mém. Acad. Sci. Berlin **1798**: 87 (1801) [NAIAD.].

60. **Cymodocea** C. Konig, Ann. Bot. Konig & Sims **2**: 96. 1 Jun 1805 ('1806).
T.: *C. aequorea* C. Konig.
(=) *Phucagrostis* Cavolini, Phucagr. Theophr. Anth. XIII. 1792.
T.: *P. major* Cavolini.

Note: The original spelling, used in all reference works, is *Cymodocea*. The orthography *Cymodocia* (cf. I.C.B.N. 1956, p. 221) was undoubtedly an error.

GRAMINEAE (POACEAE)

124. **Vossia** Wallich et Griffith, Journ. Asiat. Soc. Bengal **5**: 572. 1836.
T.: *V. procera* Wallich et Griffith, nom. illeg. [*Ischaemum cuspidatum* Roxburgh, *V. cuspidata* (Roxburgh) Griffith].
(H) *Vossia* Adanson, Fam. **2**: 243, 619. 1763 prim. [AIZOAC.].

127. **Rottboellia** Linnaeus f., Nov. Gram. Gen. 23. 1779.
T.: *R. exaltata* (Linnaeus) Linnaeus f. (Suppl. 114. 1781 sem. 2. *Aegilops exaltata* Linnaeus) (*typ. cons.*).

(=) *Manisuris* Linnaeus, Mant. 164, 300. Oct 1771.
T.: *M. myurus* Linnaeus.

134. **Chrysopogon** Trinius, Fund. Agrost. 187. 1820.
T.: *C. gryllus* (Linnaeus) Trinius (*Andropogon gryllus* Linnaeus) (*typ. cons.*).

(≡) *Pollinia* C. Sprengel, Pugil. **2**: 10. 1815.
(=) *Rhaphis* Loureiro, Fl. Cochinch. 552. 1790.
T.: *R. trivialis* Loureiro.
(=) *Centrophorum* Trinius, Fund. Agrost. 106. 1820.
T.: *C. chinense* Trinius.

134a. **Diectomis** Kunth, Mém. Mus. Hist. Nat. Paris **2**: 69. 1815.
T.: *D. fastigiata* (Swartz) Beauvois (Agrost. 132, 160. 1812. *Andropogon fastigiatus* Swartz '*fastigiatum*').

(H) *Diectomis* Beauvois, Agrost. 132, 160. 1812 [GRAM.].

Note: Both Kunth and Beauvois cited *Andropogon fastigiatus* Swartz (erroneously attributed to Linnaeus by Beauvois). Beauvois' application of *Andropogon fastigiatus* was evidently based on an error, but the combination *Diectomis fastigiata* is to be retained (Art. 55) for the real transfer of *Andropogon fastigiatus* to the genus *Diectomis*. This is why Kunth correctly cited *D. fastigiata* (Swartz) P. Beauvois himself. The reason for the conservation was perhaps that Kunth's genus is really the one based on *Andropogon fastigiatus* and that P. Beauvois's generic diagnosis was in conflict with this.

143. **Tragus** A. Haller, Hist. Stirp. Helv. **2**: 203. 1768.
T.: *T. racemosus* (Linnaeus) Allioni (Fl. Pedem. **2**: 241. 1785) (*Cenchrus racemosus* Linnaeus).

(≡) *Nazia* Adanson, Fam. **2**: 31, 582. 1763 prim.

150. **Zoysia** Willdenow, Ges. Naturf. Freunde Berlin Neue Schr. **3**: 440. 1801.
T.: *Z. pungens* Willdenow.

(=) *Osterdamia* Necker, Elem. **3**: 218. 1790.
T.: *O. matrella* (Linnaeus) O. Kuntze (*Agrostis matrella* Linnaeus).

Note: The spelling *Zoysia* has been universally accepted until the present time. The change to *Zoisia* seems to have been made for etymological reasons at the time of conservation; however this change has not been generally accepted and is also in contradiction to the first paragraph of article 73 [see e.g. Hitchcock and Chase, Manual ed. 2. 484 (1950); however, compare Roy. Hort. Soc. Dict. Gard. **4**: 2312 (1951)].

171. **Setaria** Beauvois, Agrost. 51, 178. 1812.
T.: *S. viridis* (Linnaeus) Beauvois (*Panicum viride* Linnaeus).

(H) *Setaria* (Acharius) A. Michaux, Fl. Bor.-Am. **2**: 331. 1803 trim. 1 [LICH.].
T.: *S. trichodes* Michaux.

194. **Leersia** Swartz, Prodr. 1, 21. Jun-Jul 1788.
T.: *L. oryzoides* (Linnaeus) Swartz (*Phalaris oryzoides* Linnaeus) (*typ. cons.*).

(≡) *Homalocenchrus* Mieg, Acta Helvet. **4**: 307. 1760.

201. **Ehrharta** Thunberg, Vet.-akad. Handl. Stockholm **40**: 216. *t. 8.* 1779 sem. 2.
T.: *E. capensis* Thunberg.

(=) *Trochera* L. C. Richard, Obs. Phys. Chim. Hist. Nat. Arts **13**: 225. Mar 1779.
T.: *T. striata* L. C. Richard.

206. **Hierochloë** R. Brown, Prodr. 208. Mar 1810 (‘*Hierochloe*’).
T.: *H. odorata* (Linnaeus) Wahlenberg (*Holcus odoratus* Linnaeus) (*typ. cons.*).
(=) *Savastana* Schrank, Baiersche Fl. **1**: 100, 337. 1789.
T.: *S. hirta* Schrank.
(=) *Torresia* Ruiz et Pavon, Prodr. 125. 1794.
T.: *T. utriculata* Ruiz et Pavon (Syst. 251. 1798).
(=) *Disarrenum* Labillardière, Nov. Holl. Pl. Spec. **2**: 82. *t.* 232. 1806.
T.: *D. antarcticum* (G. Forster) Labillardière (*Aira antarctica* G. Forster).

Note: Labillardière wrote *D. antarticum* and *Arista antartica;* these were corrected in “errata” to *D. antarcticum* and *Aira antarctica.*

† 221. **Crypsis** W. Aiton, Hort. Kew. **1**: 48. 1789 trim. 1.
T.: *C. aculeata* (Linnaeus) W. Aiton (*Schoenus aculeatus* Linnaeus).

Note: Conservation superfluous: (=) *Pallasia* Scopoli, Intr. 72 (1777), is to be treated as a later homonym of *Pallassia* Houttuyn, Nat. Hist. **2** (4): 382 (1775).

† 228. **Coleanthus** Seidel in Roemer et Schultes, Syst. **2**: 11, 276. 1817.
T.: *C. subtilis* (Trattinick) Seidel (*Schmidtia subtilis* Trattinick).

Note: Conservation superfluous: *Coleanthus* Seidel is legitimate because it was a substitute name for (≡) *Schmidtia* Trattinick, Fl. Österr. Kaiserth. **1**: 12 (1816), non Moench, Meth. Suppl. 217 (1802).

257. **Holcus** Linnaeus, Sp. Pl. 1047. 1753.
T.: *H. lanatus* Linnaeus (*typ. cons.*).

Note: Conservation hardly necessary; lectotypification only. For choice of type see Swartz, Neues Journ. Bot. Schrader **2** (2): 39 (1808) and M. L. Green, Prop. Brit. Bot. 193 (1929).

269. **Corynephorus** Beauvois, Agrost. 90, 159. 1812.
T.: *C. canescens* (Linnaeus) Beauvois (*Aira canescens* Linnaeus).
(=) *Weingaertneria* Bernhardi, Syst. Verzeichn. Pfl. Erfurt **1**: 23, 51. 1800.

272. **Ventenata** Koeler, Descr. Gram. Gall. Germ. 272. 1802.
T.: *V. avenacea* Koeler, nom. illeg. [*Avena dubia* Leers, *V. dubia* (Leers) Cosson] (*typ. cons.*).
(H) *Ventenatia* Cavanilles, Ic. **4**: 79. 1797 [EPACRID.].
(=) *Heteranthus* Borkhausen, Botaniker **16-18**: 71. 1796 (?).

Note: The original publication of *Heteranthus* Borkhausen (1796) has not been seen by us.

282. **Cynodon** L. C. Richard in Persoon, Syn. Pl. **1**: 85. 1805.
T.: *C. dactylon* (Linnaeus) Persoon (*Panicum dactylon* Linnaeus).
(=) *Dactilon* Villars, Hist. Pl. Dauphiné **2**: 69. 1787.
(=) *Capriola* Adanson, Fam. **2**: 31, 532. 1763 prim.
T.: ‘*Gramen dactylon* Offic.’ [syn. tax.: *Panicum dactylon* Linnaeus].

Note: (≡) *Fibichia* Koeler, Descr. Gram. Gall. Germ. 308 (1802), is illegitimate because ≡ *Dactilon* Villars 1787.

286. **Ctenium** Panzer, Denkschr. Akad. München **1813**: 288. 1814.
T.: *Chloris monostachya* A. Michaux [syn. tax.: *Ctenium aromaticum* (Walter) Wood, *Aegilops aromatica* Walter].
(=) *Campulosus* Desvaux, Nouv. Bull. Soc. Philom. Paris **2**: 189. Dec. 1810.

† 308. **Buchloë** Engelmann, Trans. Acad. Sci. St. Louis **1**: 432. 1859 quadrim. 1.
T.: *B. dactyloides* (Nuttall) Engelmann (*Sesleria dactyloides)* Nuttall).

Note: Conservation superfluous: *Calanthera* Nuttall ex W. J. Hooker, Journ. Bot. Kew Misc. **8**: 18 (1856), *Bulbilis* Rafinesque, Am. Mon. Mag. Crit. Rev. **4**: 190. (1819), and *Lasiostegia* Ruprecht ex Bentham, Pl. Hartw. 347 (1857), are all nomina nuda.

312. **Schmidtia** Steudel ex J. A. Schmidt, Beitr. Fl. Cap Verd. Ins. 144. 1852.
T.: *S. pappophoroides* Steudel ex J. A. Schmidt.
(H) *Schmidtia* Moench, Meth. Suppl. 217. 1802 [COMPOS.].
T.: *S. fruticosa* Moench.

Note: Another homonym: *Schmidtia* Trattinick, Fl. Österr. Kaiserth. **1**: 12 (1816) [GRAM.].

320. **Echinaria** Desfontaines, Fl. Atl. **2**: 385. Jun-Jul 1799.
T.: *E. capitata* (Linnaeus) Desfontaines (*Cenchrus capitatus* Linnaeus).
(H) *Echinaria* Fabricius, Enum. 206. 1759 [GRAM.].
≡ *Cenchrus* Linnaeus 1753.
(≡) *Panicastrella* Moench, Meth. 205. 1794.

329. **Cortaderia** O. Stapf, Gard. Chron. ser. 3. **22**: 378, 397. 1897.
T.: *C. selloana* (J. A. et J. H. Schultes) Ascherson et Graebner (Syn. Mitteleur. Fl. **2** (1): 325. 1900) (*Arundo selloana* J. A. et J. H. Schultes).
(=) *Moorea* Lemaire, Ill. Hort. **2**: (misc.): 15. 1854.
T.: *M. argentea* (C. G. Nees) Lemaire (*Gynereum argenteum* C. G. Nees).

356. **Diarrhena** Beauvois, Agrost. 142, 160, 162. 1812.
T.: *D. americana* Beauvois [*Festuca diandra* A. Michaux, non Moench 1794].
(=) *Corycarpus* Zea, Acta Matr. 1806.

Note 1: The original publication of *Corycarpus* Zea (1806) was not consulted by us. The name was spelled *Korycarpus* by Lagasca, Gen. Sp. **1**: 4 (1816).
Note 2: (≡) *Diarina* Rafinesque was not validly published until 1819.

† 358. **Zeugites** P. Browne, Hist. Jamaica 341. 1756.
T.: *Z. americana* Willdenow (*Apluda zeugites* Linnaeus, Syst. Nat. ed. 10. 1306. (1759).

Note: Conservation superfluous: P. Browne's publication is valid and the name dates from 1756.

374. **Lamarckia** Moench, Meth. 201. 1794 ('*Lamarkia*'); corr. Koeler, Descr. Gram. Gall. Germ. 376. 1802.
T.: *L. aurea* (Linnaeus) Moench (*Cynosurus aureus* Linnaeus).
(V) *Lamarkia* Moench, Meth. 201. 1794.
(H) *Lamarckia* Olivi, Zool. Adriat. 258. 1792 [ALGAE].
(≡) *Achyrodes* Boehmer in Ludwig, Def. Gen. Pl. 420. 1760.

381. **Scolochloa** Link, Hort. Berol. **1**: 1136. 1827 sem. 2.
T.: *S. festucacea* (Willdenow) Link (*Arundo festucacea* Willdenow).

(H) *Scolochloa* Mertens et Koch, Deutschl. Fl. **1**: 374, 528. 1823 [GRAM.].
T.: *S. arundinacea* (Beauvois) Mertens et Koch (*Donax arundinaceus* Beauvois).

† 383. **Glyceria** R. Brown, Prodr. 179. Mar 1810.
T.: *G. fluitans* (Linnaeus) R. Brown (*Festuca fluitans* Linnaeus).

Note: Conservation superfluous: *Panicularia* Heister ex Fabricius, Enum. 207 (1759), was an illegitimate substitute for *Poa* Linnaeus, Sp. Pl. 67 (1753), and in ed. 2 (1763) it was a renaming of *Poa aquatica* Linnaeus.

384. **Puccinellia** Parlatore, Fl. Ital. **1**: 366. 1848.
T.: *P. distans* (Linnaeus) Parlatore (*Poa distans* Linnaeus) (*typ. cons.*).

(≡) *Atropis* Ruprecht, Beitr. Pflanzenk. Russ. Reich. **2**: 64. 1845.

Note: (≡) *Atropis* Ruprecht was doubtfully validly published in 1845, being perhaps intended as a sectional name. Cf. Sprague, Kew Bull. **1940**: 84.

† 417. **Phyllostachys** Siebold et Zuccarini, Abh. Akad. München **3**: 745. 1843 [1844?].
T.: *P. bambusoides* Siebold et Zuccarini.

Note: Conservation superfluous: *Phyllostachys* Torrey, Ann. Lyc. N.Y. **3**: 404 (1836), was not validly published (nomen nudum provisorium). McClure's proposal (Taxon **6**: 156. 1957) to place *Sinoarundinaria* Ohwi (1931) on the list is also superfluous: *Phyllostachys* Siebold et Zuccarini is legitimate without conservation and has priority.

CYPERACEAE

452. **Lipocarpha** R. Brown in Tuckey, Narr. Exp. Congo 459. 1818.
T.: *L. argentea* (Vahl) R. Brown nom. illeg. [*Hypaelyptum argenteum* Vahl, *Scirpus senegalensis* Lamarck, Lipocarpha senegalensis (Lamarck) Th. et H. Durand].

(=) *Hypaelyptum* Vahl, Enum. **2**: 283. 1806.

† 454. **Ascolepis** C. G. Nees ex Steudel, Syn. Pl. Cyp. 105. 1855.
T.: *A. eriocauloides* (Steudel) C. G. Nees ex Steudel (*Kyllinga eriocauloides* Steudel) (*typ. cons.*).

Note: Conservation superfluous: (=) *Platylepis* Kunth, Kunth, Enum. **2**: 269 (1837 sem. 1), is a later homonym of *Platylepis* A. Richard, Mém. Soc. Hist. Nat. Paris **4**: 34 (1828) (*nom. cons.*) (1516), and therefore unavailable.

459. **Mariscus** Vahl, Enum. **2**: 372. 1806.
T.: *M. capillaris* (Swartz) Vahl (*Schoenus capillaris* (Swartz) (*typ. cons.*).

(H) *Mariscus* Zinn, Catal. 79. Mai 1757 [CYPER.].
T.: *Schoenus mariscus* Linnaeus [*Cladium mariscus* (Linnaeus) Pohl].

Note: The genus *Mariscus* J. Gaertner, Fruct. **1**: 11 (1788), did not include the type species of the conserved name; it is illegitimate because of *Mariscus* Zinn. (1757).

462. **Kyllinga** Rottboell, Descr. Ic. Nov. Pl. 12. 1773.
T.: *K. monocephala* Rottboell, nom. illeg. [*Schoenus coloratus* Linnaeus, *K. colorata* (Linnaeus) Druce] (*typ. cons.*).

(H) *Killinga* Adanson, Fam. **2**: 498, 539. 1763 prim. [UMBELL.].
≡ *Athamantha* Linnaeus 1753.

465. **Ficinia** H. A. Schrader, Comm. Soc. Reg. Sci. Gott. ser. 2. **7**: 143. 1832.
T.: *F. filiformis* (Lamarck) H. A. Schrader (*Schoenus filiformis* Lamarck) (*typ. cons.*).

(=) *Melancranis* Vahl, Enum. **2**: 239. 1806.

Note: (=) *Hypolepis* Beauvois ex Lestiboudois, Ess. Cyp. 33 (1819), is not available because of *Hypolepis* Bernhardi, Neues Journ. Bot. Schrader **1** (2): 34 (1806) [PTERID.], and *Hypolepis* Persoon, Syn. Pl. **2**: 598 (1807) [RAFFL.].

468a. **Blysmus** Panzer ex J. A. Schultes, Mant. **2**: 41. 1824.
T.: *B. compressus* (Linnaeus) Panzer ex Link Hort. Berol. **1**: 278. 1827 sem. 2 (*Schoenus compressus* Linnaeus).

(=) *Nomochloa* Beauvois ex Lestiboudois, Ess. Cyp. 37. 1819.

468b. **Schoenoplectus** Palla, Bot. Jahrb. **10**: 298. 4 Dec 1888.
T.: *S. lacustris* (Linnaeus) Palla (*Scirpus lacustris* Linnaeus).

(=) *Heleophylax* Beauvois ex Lestiboudois, Ess. Cyp. 41. 1819.
(=) *Hymenochaeta* Beauvois ex Lestiboudois, Ess. Cyp. 43. 1819.
(=) *Elytrospermum* C. A. Meyer, Mém. Acad. St.-Pétersb. Sav. Étr. **1**: 200. 1831.
T.: *E. californicum* C. A. Meyer.

Note: (=) *Pterolepis* H. A. Schrader, Gött. Gel. Anz. **1821**: 2071 (1821), is not now available because of *Pterolepis* Miquel, Comm. Phytogr. **2**: 72 (1839) (*nom. cons.*); (=) *Malacochaete* C. G. Nees, Linnaea **9**: 293 (1834), was an illegitimate substitute name for Schrader's name.

471a. **Bulbostylis** Kunth, Enum. **2**: 205. 1837 sem. 1.
T.: *B. capillaris* (Linnaeus) C. B. Clarke (*Scirpus capillaris* Linnaeus) (*typ. cons.*).

(H) *Bulbostylis* Steven, Mém. Soc. Nat. Moscou **5**: 355. 1817 [CYPER.].
(=) *Stenophyllus* Rafinesque, Neogenyton 4. 1825.
T.: *S. cespitosus* Rafinesque (*Scirpus stenophyllus* Elliott).

Note 1: Kunth's name was not intended as new: it was *Bulbostylis* Steven emended by him. This is the creation of a later homonym by conservation on account of typification!
Note 2: Another homonym: *Bulbostylis* A. P. Decandolle, Prodr. **5**: 138 (1836) [COMPOS.].
Note 3: Svenson's designation (N. Am. Fl. **18**: 540. 1957) of *B. stenophylla* (Elliott) C. B. Clarke as type was later than the selection of *B. capillaris* (Linnaeus) C. B. Clarke, and the substitution was unintentional.

471b. **Fimbristylis** Vahl, Enum. **2**: 285. 1806.
T.: *F. dichotoma* (Linnaeus) Vahl ('*dichotomum*') (*Scirpus dichotomus* Linnaeus) (*typ. cons.*).

(=) *Iria* (L. C. Richard ex Persoon) Hedwig, Gen. Pl. 360. 1806.
T.: *Cyperus monostachyos* Linnaeus.

492. **Rhynchospora** Vahl, Enum. **2**: 229. 1806 ('*Rynchospora*'); corr. Willdenow, Enum. Pl. Hort. Berol. 71. 1809 sem. 1.
T.: *R. alba* (Linnaeus) Vahl (*Schoenus albus* Linnaeus) (*typ. cons.*).

(V) *Rynchospora* Vahl, Enum. **2**: 229. 1806.
(=) *Dichromena* A. Michaux, Fl. Bor.-Am. **1**: 37. 1803 trim. 1.
T.: *D. leucocephala* A. Michaux.

Note: Triodon L. C. Richard in Persoon, Syn. Pl. **1**: 60 (1805), was not validly published, being mentioned in synonymy.

542. **Pritchardia** Seemann et H. Wendland ex H. Wendland, Bonplandia **10**: 197. 1 Jul 1862.
T.: *P. pacifica* Seemann et H. Wendland ex H. Wendland.

(H) *Pritchardia* Unger ex Endlicher, Gen. Pl. Suppl. **2**: 102. 1842 [FOSSIL-INC. SED.].

† 543. **Washingtonia** H. Wendland, Bot. Zeit. **37**: lxi, 68, 148. 1879.
T.: *W. filifera* (Linden ex André) H. Wendland (*Pritchardia filifera* Linden ex André).

Note 1: Washingtonia Rafinesque, Am. Mon. Mag. Crit. Rev. **2**: 176 (1818), is a *nomen nudum*.

Note 2: (H) *Washingtonia* Winslow (Calif. Farmer **2**: 58. 24 Aug 1854) was published "in anticipation of the future acceptance of the group concerned"; it was a provisional name ("if it should be properly ranked as a new genus"), the publication being consequently not valid. Conservation is therefore superfluous. Winslow's obscurely published article is quoted in part (not always accurately) by W. J. Hooker (Journ. Bot. Kew Misc. **7**: 26-29. 1855).

567. **Pigafetta** (Martius) Beccari, Malesia **1**: 89. 1877 ('*Pigafettia*'), corr. J. D. Hooker in Bentham et Hooker, Gen. Pl. **3**: 933. 14 Apr 1883.
T.: *P. papuana* Beccari.

(V) *Pigafettia* (Martius) Beccari, Malesia **1**: 89. 1877.

(H) *Pigafetta* Adanson, Fam. **2**: 223. 1763 prim. [ACANTH.].
≡ *Eranthemum* Linnaeus 1753.

575. **Arenga** Labillardière in A. P. Decandolle, Bull. Soc. Philom. Paris **2**: 161. Nov (sero) 1800.
T.: *Arenga saccharifera* Labillardière [syn. tax.: *A. pinnata* (Wurmb) Merrill, *Saguerus pinnatus* Wurmb].

(=) *Saguerus* Steck, De Sagu 15. 1757.
T.: *S. pinnatus* Wurmb (Verh. Batav. Genootsch. **1**: 351. 1781).

594. **Chamaedorea** Willdenow, Sp. Pl. **4**: 638, 800. 1806.
T.: *C. gracilis* Willdenow, nom. illeg. [*Borassus pinnatifrons* N. J. Jacquin, *C. pinnatifrons* (N. J. Jacquin) Oersted].

(=) *Nunnezharia* Ruiz et Pavon, Prodr. 147. 1794.
T.: *N. fragrans* Ruiz et Pavon (Syst. 294. 1798).

Note 1: (=) *Nunnezia* Willdenow, Sp. Pl. **4**: 1154 (1806) is a superfluous name for *Nunnezharia* Ruiz et Pavon 1794.

Note 2: Dr H. E. Moore informs us (in litt.) that the genus *Morenia* Ruiz et Pavon, Prodr. 150 (1794) (T.: *M. fragrans* Ruiz et Pavon), may also be considered congeneric with *Chamoaedorea* Willdenow (1806). A proposal to add this name to this case as a *nomen rejiciendum* may be put forward in due course.

639. **Veitchia** H. Wendland in Seemann, Fl. Vitiens. 270. 31 Jul 1868.
T.: *V. storckii* H. Wendland (*typ. cons.*).

Veitchia Lindley, Gard. Chron. **1861**: 265. 23 Mar 1861 [PINAC.].
T.: *V. japonica* Lindley [syn. tax.: *Picea jezoënsis* (Siebold et Zuccarini) Carrière].

Note: For comment on the choice of type see Moore, Gent. Herb. **8**: 483 (1957), and Taxon **7**: 83 (1958). It is proposed to change the choice of type to *V. joannis* H. Wendland.

657. **Orbignya** C. F. P. Martius ex Endlicher, Gen. Pl. 257. Oct 1837.
T.: *O. phalerata* C. F. P. Martius (Hist. Nat. Palm. **3**: 302. 1845).

(H) *Orbignya* Bertero, Mercurio Chil. **16**: 737. 15 Jul 1829 [EUPHORB.].
T.: *O. trifolia* Bertero.

Note: The name was spelled *Orbignia* by Martius in both of his subsequent publications: Palm. Orbign. 125 (1844), Hist. Nat. Palm. **3**: 302 (1845).

660. **Maximiliana** Martius, Palm. Fam. 20. 15 Apr 1824.
T.: *M. regia* Martius (Hist. Nat. Palm. **2**: 131. 1826?), nom. illeg., non *Maximilianea regia* Martius 1819 (*typ. cons.*), *M. martiana* H. Karsten (Linnaea **28**: 273. Jan 1857).

(H) *Maximilianea* Martius in Schrank, Flora **2**: 452. 1819 [COCHLOSP.].
T.: *M. regia* Martius.
≡ *Azeredia* F. Allemao 1846.

Note: *Maximilianea* Martius in Schrank (1819) is rejected against *Cochlospermum* Kunth (1824) (*nom. cons.*) (5250).

† 670. **Desmoncus** Martius, Palm. Fam. 20. 15 Apr 1824.
T.: *D. polyacanthos* Martius (Hist. Nat. Palm. **2**: 84. 1824) (*typ. cons.*).

Note: Conservation superfluous: *Atitara,* Dict. Sci. Nat. **3**: 277 (Dec 1816), was a vernacular name, not a validly published generic name.

CYCLANTHACEAE

682. **Ludovia** A. T. Brongniart, Ann. Sci. Nat. Bot. ser. 4. **15**: 361. 1861 trim. 3.
T.: *L. lancifolia* A. T. Brongniart ('*lancaefolia*').

(H) *Ludovia* Persoon, Syn. Pl. **2**: 576. 1807 [CYCLANTH.].

ARACEAE

† 708. **Symplocarpus** R. A. Salisbury ex Nuttall, Gen. **1**: 105. Mai 1818.
T.: *S. foetidus* (Linnaeus) Nuttall ('*foetida*') (*Dracontium foetidum* Linnaeus).

Note: Conservation superfluous: all publications of (≡) *Spathyema* Rafinesque prior to 1839 are invalid.

723. **Amorphophallus** Blume ["Batav. Diario (1825)" = Batav. Courant, 23 Nov 1825, descr. sed sine nomine] ex Decaisne, Herb. Timor. 38. 1835 (Nouv. Ann. Mus. Paris **3**: 366. 1834).
T.: *A. campanulatus* (Roxburgh) Blume ex Decaisne (*Arum campanulatum* Roxburgh).

(≡) *Pythion* Martius, Flora **14**: 459. 1831.

Note: (≡) *Candarum* H. G. L. Reichenbach ex Schott et Endlicher, Melet. Bot. 17 (1832), is illegitimate because of (≡) *Pythion* Martius (1831).

739. **Philodendron** Schott, Wien. Zeitschr. Kunst Litt. Theater Mode **1829** (3): 780. 1829 ('*Philodendrum*'); corr. Schott in Schott et Endlicher, Melet. Bot. 19. 1832.
T.: *P. grandifolium* (N. J. Jacquin) Schott (*Arum grandifolium* N. J. Jacquin).

(V) *Philodendrum* Schott, Wien. Zeitschr. Kunst Litt. Theater Mode **1829** (3): 780. 1829.

Note 1: *Baursea* Hoffmannsegg has never been validly published as a generic name. In 1824 (Verz. Pfl. 42) it was a *nomen nudum;* later (H. G. L. Reichenbach, Consp. 44. 1828) it was a subgenus!

Note 2: Conservation superfluous except for the change in orthography.

747. **Peltandra** Rafinesque, Journ. Phys. Chim. Hist. Nat. **89**: 103. Aug 1819.
T.: *P. undulata* Rafinesque.
(=) *Houttinia* Necker, Elem. **3**: 291. 1790.

748. **Zantedeschia** C. Sprengel, Syst. **3**: 756, 765. 1826.
T.: *Z. aethiopica* (Linnaeus) C. Sprengel (*Calla aethiopica* Linnaeus).
(≡) *Aroides* Heister ex Fabricius, Enum. ed. 2. 42. 1763.

Note: (≡) *Richardia* Kunth, Mém. Mus. Hist. Nat. Paris **4**: 437 (1818), is unavailable, being a later homonym of *Richardia* Linnaeus, Sp. Pl. 330 (1753) [RUBIAC.]; it was also illegitimate on publication because it was a superfluous name for (=) *Aroides* Heister ex Fabricius 1763.

779. **Helicodiceros** Schott in C. Koch, Ind. Sem. Hort. Berol. **1855** (Append.): 2. 1855.
T.: *H. muscivorus* (Linnaeus f.) Engler (in A. et C. Decandolle, Monogr. Phan. **2**: 605. Sep 1879) (*Arum muscivorum* Linnaeus f.).
(≡) *Megotigea* Rafinesque, Fl. Tell. **3**: 64. Nov-Dec 1837 ('1836').

Note 1: The publication of the name *Helicodiceros* by Schott in 1853 (Oesterr. Bot. Wochenbl. **3**: 369) was not valid, being based only on a reference to an existing species.

Note 2: Dracunculus crinitus Schott was legitimate on publication. In a later publication Schott (Syn. Aroid. **1**: 21. 1856) cited *Arum crinitum* Aiton as a synonym. The latter is illegitimate since the epithet *muscivorum* ought to have been adopted by Aiton, *Arum muscivorum* Linnaeus f. (Suppl. 410. 1781) being cited in synonymy. *Helicodiceros muscivorus* (Linnaeus f.) Engler is presumably the correct name for the type species.

784. **Biarum** Schott in Schott et Endlicher, Melet. Bot. 17. 1832.
T.: *B. tenuifolium* (Linnaeus) Schott (*Arum tenuifolium* Linnaeus) (*typ. cons.*).
(≡) *Homaïd* Adanson, Fam. **2**: 470. 1763 prim.

RESTIONACEAE

† 800. **Lyginia** R. Brown, Prodr. 248. Mar 1810.
T.: *L. barbata* R. Brown (*typ. cons.*).

Note: Conservation superfluous: *Schoenodum* Labillardière, Nov. Holl. Pl. Spec. **2**: 79 (1806), need not be rejected because its type *S. tenax* is typified by the female plant of Labillardière, which is *Leptocarpus* R. Brown 1810 (*nom. cons.*) (808) and not *Lyginia*. See R. Brown, Prodr. 248 (1810) and Kunth, Enum. **3**: 445 (Jul 1841).

808. **Leptocarpus** R. Brown, Prodr. 250. Mar 1810.
T.: *L. aristatus* R. Brown (*typ. cons.*).
(=) *Schoenodum* Labillardière, Nov. Holl. Pl. Spec. **2**: 79. 1806.
T.: *S. tenax* Labillardière (vide Kunth, Enum. **3**: 445. Jul 1841).

Note: See note under no. 800, *Lyginia*.

815. **Hypolaena** R. Brown, Prodr. 251. Mar 1810.
T.: *H. fastigiata* R. Brown (*typ. cons.*).
(=) *Calorophus* Labillardière, Nov. Holl. Pl. Spec. **2**: 78. *t.* 228. 1806.
T.: *C. elongata* Labillardière.

816. **Hypodiscus** C. G. Nees in Lindley, Nat. Syst. 450. 1836.
T.: *H. aristatus* (Thunberg) Masters (Journ. Linn. Soc. Bot. **10**: 252. 1868) (*Restio aristatus* Thunberg).
(=) *Lepidanthus* C. G. Nees, Linnaea **5**: 665. Oct 1830.
T.: *L. willdenowia* C. G. Nees, nom. illeg. (*Willdenowia striata* Thunberg).

ERIOCAULACEAE

830. **Paepalanthus** Kunth, Enum. **3**: 498. Jul 1841.
T.: *P. lamarckii* Kunth (*typ. cons.*).
(H) *Paepalanthus* C. F. P. Martius, Nova Acta Acad. Leop.-Carol. **17** (1): 13. 1835 [ERIOCAUL.].
(=) *Dupatya* Velloso, Fl. Flum. 35. 1825.

Note: Paepalanthus "Martius" was conserved for *P. lamarckii* Kunth (1841). This species, however, is not included in *Paepalanthus* Martius (1835). The authority for the conserved name should be changed to accord with the type. It is not clear whether *Paepalanthus* Martius (1835) is accepted as a genus by the author or not. However, the conservation implies that the name has to be definitely accepted as validly published.

BROMELIACEAE

861. **Aechmea** Ruiz et Pavon, Prodr. 47. 1794.
T.: *A. paniculata* Ruiz et Pavon (Fl. Peruv. Chil. **3**: 37. 1802).
(=) *Hoiriri* Adanson, Fam. **2**: 67, 584. 1763 prim.
T.: *Bromelia nudicaulis* Linnaeus ('Plum. ic. 62').

878. **Pitcairnia** L'Héritier, Sert. Angl. 5. 1788.
T.: *P. bromeliaefolia* L'Héritier.
(=) *Hepetis* Swartz, Prodr. 4, 56. Jun-Jul 1788.
T.: *H. angustifolia* Swartz.

891. **Vriesea** Lindley, Bot. Reg. **29**: *t. 10.* 7 Feb 1843 ('*Vriesia*'); corr. J. G. Beer, Bromel. 91. 1857.
T.: *V. psittacina* (W. J. Hooker) Lindley (*Tillandsia psittacina* W. J. Hooker).
(V) *Vriesia* Lindley, Bot. Reg. **29**: *t. 10.* 7 Feb 1843.
(≡) *Hexalepis* Rafinesque, Fl. Tell. **4**: 24. 1838 med.

COMMELINACEAE

894. **Palisota** H. G. L. Reichenbach ex Endlicher, Gen. Pl. 125. Dec 1836.
T.: *P. ambigua* (Beauvois) C. B. Clarke (in A. et C. Decandolle, Monogr. Phan. **3**: 131. Jun 1881) (*Commelina ambigua* Beauvois).
(=) *Duchekia* Kosteletzky, Allg. Med. Pharm. Fl. **1**: 213. 1831.
T.: *D. hirsuta* (Thunberg) Kosteletzky (*Dracaena hirsuta* Thunberg).

904. **Cyanotis** D. Don, Prodr. Fl. Nepal. 45. 1 Feb 1825.
T.: *C. barbata* D. Don.
(=) *Tonningia* Necker, Elem. **3**: 165. 1790.
LT.: *T. axillaris* (Linnaeus) O. Kuntze (*Commelina axillaris* Linnaeus) (vide O. Kuntze, Rev. Gen. Pl. **2**: 721. 1891)

Note: Zygomenes R. A. Salisbury, Trans. Hort. Soc. London **1**: 271 (1812), is a *nomen nudum.*

909. **Dichorisandra** Mikan, Del. Fl. Faun. Bras. *t. 3.* 1820.
T.: *D. thyrsiflora* Mikan.
(=) *Stickmannia* Necker, Elem. **3**: 171. 1790.
LT.: *S. hexandra* (Aublet) O. Kuntze (*Commelina hexandra* Aublet) (vide O. Kuntze, Rev. Gen. Pl. **2**: 721. 1891).

910. **Tinantia** Scheidweiler, Allg. Gartenz. **7**: 365. 16 Nov 1839.
T.: *T. fugax* Scheidweiler.

(H) *Tinantia* Dumortier, Anal. Fam. 58. 1829 [IRIDAC.].

(=) *Pogomesia* Rafinesque, Fl. Tell. **3**: 67. Nov-Dec 1837 ('1836').
T.: *P. undata* (Humboldt et Bonpland) Rafinesque (*Tradescantia undata* Humboldt et Bonpland).

PONTEDERIACEAE

921. **Eichhornia** Kunth, Eichhornia, genus novum [Diss.] 1842 [Pritzel 4938]; Enum. **4**: 129. Jul 1843.
T.: *E. azurea* (Swartz) Kunth (*Pontederia azurea* Swartz) (*typ. cons.*).

(=) *Piaropus* Rafinesque, Fl. Tell. **2**: 81. 1837 quadrim. 1 ('1836').

Note: We have been unable to consult Kunth's original dissertation of 1842.

† 923. **Reussia** Endlicher, Gen. Pl. 139. Dec 1836.
T.: *R. triflora* Seubert (in C. F. P. Martius, Fl. Bras. **3** (1): 96. 1 Jun 1847).

Note: Conservation superfluous: Dennstedt's publication (Schluess. 33. 1818) of *Reussia sarmentosa* is not valid as a combined generic and specific description, since it depends solely on a reference to a species, "Valli-kara." Hence *Reussia* was not validly published at that time as a generic name.

† 924. **Heteranthera** Ruiz et Pavon, Prodr. 9. 1794.
T.: *H. reniformis* Ruiz et Pavon (Fl. Peruv. Chil. **1**: 43. 1798).

Note: Conservation superfluous: *Phrynium* Loefling, Iter Hisp. 178 (1758), was not validly published; it was mentioned only as a synonym.

JUNCACEAE

937. **Luzula** A. P. Decandolle in Lamarck et Decandolle, Fl. Franç. ed. 3. **3**: 158. 1805.
T.: *L. campestris* (Linnaeus) A. P. Decandolle (*Juncus campestris* Linnaeus) (*typ. cons.*).

(=) *Juncoides* Adanson, Fam. **2**: 47, 564. 1763 prim.
T.: 'Mich. t. 31' [*Juncus campestris* Linnaeus].

LILIACEAE

944. **Narthecium** Hudson, Fl. Angl. 127. 1762 med.
T.: *N. ossifragum* (Linnaeus) Hudson (*Anthericum ossifragum* Linnaeus).

(H) *Narthecium* L. Gérard, Fl. Gallo-prov. 142. 1761 trim. 1 [LILIAC.].
T.: *Anthericum calyculatum* Linnaeus ('*calyculatam*').

955. **Amianthium** A. Gray, Ann. Lyc. N.Y. **4**: 121. Nov 1837 ('1848').
T.: *A. muscaetoxicum* (Walter) A. Gray (*Melanthium muscaetoxicum* Walter) (*typ. cons.*).

(=) *Chrosperma* Rafinesque, Neogenyton 3. 1825.
T.: *Melanthium laetum* W. Aiton.

957. **Stenanthium** (A. Gray) Kunth, Enum. **4**: 189. Jul 1843.
T.: *S. angustifolium* (Pursh) Kunth (*Veratrum angustifolium* Pursh, type of *Veratrum* subg. *Stenanthium* A. Gray).
(≡) *Anepsa* Rafinesque, Fl. Tell. **2**: 31. 1837 quadrim. 1; **4**: 27. 1838 med. ('1836').

962. **Schelhammera** R. Brown, Prodr. 273. Mar 1810.
T.: *S. undulata* R. Brown (*typ. cons.*).
(H) *Schelhameria* Fabricius, Enum. 161. 1759 [CRUCIF.].
nom. rej. vs. *Matthiola* R. Brown 1810 (*nom. cons.*) (3042).

Note: Another homonym: *Schelhammeria* Moench, Meth. Suppl. 119 (1802) [CYPERAC.].

967. **Tricyrtis** Wallich, Tent. Fl. Napal. 61. *t. 46.* 1826 sem. 2.
T.: *T. pilosa* Wallich.
(=) *Compsoa* D. Don, Prodr. Fl. Nepal. 50. 1 Feb 1825.
T.: *C. maculata* D. Don.

968. **Burchardia** R. Brown, Prodr. 272. Mar 1810.
T.: *B. umbellata* R. Brown.
(H) *Burcardia* [Heister] Duhamel, Traité Arb. Arbust. **1**: xxx, 111. 1755 [VERBEN.].
≡ *Callicarpa* Linnaeus 1753.

Note: Another homonym: *Burchardia* Necker, Elem. **2**: 76 (1790) [MYRTAC.].

974. **Anguillaria** R. Brown, Prodr. 273. Mar 1810.
T.: *A. dioica* R. Brown (*typ. cons.*).
(H) *Anguillaria* J. Gaertner, Fruct. **1**: 372. 1788.
T.: *A. bahamensis* J. Gaertner.
≡ *Heberdenia* Banks ex A. Decandolle 1841 (*nom. cons.*) (6288).

982. **Paradisea** Mazzucato, Viag. Bot. Alpi Giul. 27. 1811.
T.:*P. hemeroanthericoides* Mazzucato, nom. illeg. [*Hemerocallis liliastrum* Linnaeus, *P. liliastrum* (Linnaeus) Bertoloni].
(≡) *Liliastrum* Wernischeck, Gen. Pl. 205. 1763.

985. **Bulbine** [Linnaeus] Willdenow, Enum. Pl. Hort. Berol. 372. 1809 sem. 1.
T.: *B. frutescens* (Linnaeus) Willdenow (*Anthericum frutescens* Linnaeus).
(H) *Bulbine* J. Gaertner, Fruct. **1**: 41. 1788 [AMARYLL.].
T.: *B. asiatica* (Linnaeus) J. Gaertner (*Crinum asiatium* Linnaeus).

Note: Phalangium (Linnaeus) P. Miller, Gard. Dict. Abr. ed. 4 (1754), = *Anthericum* Linnaeus (1753). *Phalangium* Boehmer in Ludwig, Def. Gen. Pl. 362 (1760), also includes the type of *Anthericum* and is therefore not a separate genus; the name should not be listed here.

987. **Simethis** Kunth, Enum. **4**: 618. Jul 1843.
T.: *S. bicolor* Kunth, nom. illeg. [*Anthericum planifolium* Vandelli ex Linnaeus, *S. planifolia* (Linnaeus) Grenier et Godron].

Note: Conservation superfluous: *Pubilaria* Rafinesque, Fl. Tell. **2**: 27 (1837), was not definitely accepted by its author; moreover there is no generic description, as required for a monotypic genus not based on a new species.

992. **Thysanotus** R. Brown, Prodr. 282. Mar 1810.
T.: *T. junceus* R. Brown, nom. illeg. [*Chlamysporum juncifolium* R. A. Salisbury. Parad. Lond. *t. 103.* 1 Apr 1808, *T. juncifolius* (R. A. Salisbury) Rickett et Stafleu *comb. nov.*].
(≡) *Chlamysporum* R. A. Salisbury, Parad. Lond. *t. 103.* 1807.

1006. **Schoenolirion** Torrey ex E. M. Durand, Journ. Acad. Nat. Sci. Phil. ser. 2. **3**: 103. Dec 1855.
T.: *S. michauxii* Torrey (Bot. Mex. Bound. 220. 1859) (nom. illeg.) [*Phalangium croceum* A. Michaux, *S. croceum* (A. Michaux) A. Gray].

(=) *Amblostima* Rafinesque, Fl. Tell. **2**: 26. 1837 quadrim. 1 ('1836').
(=) *Oxytria* Rafinesque, Fl. Tell. **2**: 26. 1837 quadrim. 1 ('1836').
T.: *O. crocea* Rafinesque (*Phalangium croceum* Nuttall 1818, non A. Michaux 1803).

Note 1: Torrey's genus is based on *Phalangium croceum* A. Michaux (1803). The citation of *S. album* E. M. Durand as the type must be an error: this new species of Durand was based on a specimen consisting of a few fragments only. The generic diagnosis is based on Michaux' species. Torrey lumped several white-flowered species with Michaux' (which, however, he cited first) and changed the name because he thought Michaux' name was misleading. *S. album* Durand was the first combination made, apparently based on a white-flowered species.

Note 2: Amblostigma Rafinesque included *Phalangium croceum* A. Michaux on publication.

1007. **Chlorogalum** (Lindley) Kunth, Enum. **4**: 681. Jul 1843.
T.: *C. pomeridianum* (A. P. Decandolle) Kunth (*Scilla pomeridiana* A. P. Decandolle) (*typ. cons.*).

(≡) *Laothoe* Rafinesque, Fl. Tell. **3**: 53. Nov-Dec 1837 ('1836').

Note: The holotype-species is Lindley's *Ornithogalum divaricatum,* the other of Kunth's two species, since reduced to *S. pomeridiana.*

1011. **Bowiea** W. H. Harvey ex J. D. Hooker, Bot. Mag. *t. 5619.* 1 Jan 1867.
T.: *B. volubilis* W. H. Harvey ex J. D. Hooker.

(H) *Bowiea* Haworth, Lond. Edinb. Dubl. Philos. Mag. **64**: 299. 1824 [LILIAC.].
T.: *B. africana* Haworth.

1018. **Hosta** Trattinick, Arch. Gewächsk. **1**: 55. *t. 89.* 1812 (1814?).
T.: *H. japonica* Trattinick.

(H) *Hosta* N. J. Jacquin, Hort. Schoenbr. **1**: 60. 1797 [VERBEN.].

Note: Saussurea Salisbury, Trans. Linn. Soc. **8**: 11 (1807), is a *nomen nudum.*

1021. **Blandfordia** J. E. Smith, Exot. Bot. **1**: 5. *t. 4.* 1 Dec 1804.
T.: *B. nobilis* J. E. Smith.

(H) *Blandfordia* Andrews, Bot. Repos. **5**: *t. 343.* 9 Feb 1804 [DIAPENS.].
T.: *B. cordata* Andrews.

1029. **Haworthia** H. A. Duval, Pl. Succ. Horto Alenc. 7. 1809.
T.: *H. arachnoidea* (Linnaeus) H. A. Duval (*Aloë pumila* var. *arachnoidea* Linnaeus) (*typ. cons.*).

(=) *Catevala* Medikus, Theodora 67. 1786.

Note: Catevala Medikus includes *Aloë pumila* var. *arachnoidea* Linnaeus.

1032. **Laxmannia** R. Brown, Prodr. 285. Mar 1810.
T.: *L. gracilis* R. Brown (*typ. cons.*).

(H) *Laxmannia* J. R. et G. Forster, Char. Gen. Pl. 93. 1776 [COMPOS.].
T.: *L. arborea* J. R. et G. Forster.

Note 1: Another homonym: *Laxmannia* Schreber, Gen. **2**: 800 (1791) [RUTAC.].

Note 2: Petrobium R. Brown, Trans. Linn. Soc. **12**: 113 (1816), was an illegitimate substitute name for *Laxmannia* J. R. et G. Forster (1776). The fact that the latter is no longer available has no effect on the illegitimacy of *Petrobium.* Brown's name was still-born and can be saved only by conservation.

1037. **Johnsonia** R. Brown, Prodr. 287. Mar 1810.
T.: *J. lupulina* R. Brown.

(H) *Johnsonia* P. Miller, Gard. Dict. Abr. ed. 4. 1754 [VERBEN.].
≡ *Callicarpa* Linnaeus 1753.

Note: Other homonyms: *Johnsonia* Adanson, Fam. **2**: 343 (1763 prim.) [= *Cedrela* P. Browne, Hist. Jamaica 158 (1756)], [MELIAC.], and *Johnsonia* Necker, Elem. **2**: 49 (1790) [SOLAN.].

1044. **Baxteria** R. Brown ex W. J. Hooker, London Journ. Bot. **2**: 492. 1843.
T.: *B. australis* R. Brown.

(H) *Baxtera* H. G. L. Reichenbach, Consp. 131. 1828 [ASCLEP.].

1046. **Agapanthus** L'Héritier, Sert. Angl. 10. 1788.
T.: *A. umbellatus* L'Héritier, nom. illeg. [*Crinum africanum* Linnaeus, *A. africanus* (Linnaeus) Hoffmannsegg].

(≡) *Abumon* Adanson, Fam. **2**: 54, 511-512. 1763 prim.

Note: Unavailable are (=) *Tulbaghia* Heister, Brunsvig. x (1753) (nom. rej. vs. *Tulbaghia* Linnaeus 1771, *nom. cons.*, 1047) and (=) *Mauhlia* Dahl, Obs. Syst. Linn. 25 (1787), a superfluous name for *Abumon* Adanson (1763).

1047. **Tulbaghia** Linnaeus, Mant. 148, 223. Oct 1771 ('*Tulbagia*'); corr. Necker, Elem. **3**: 188. 1790.
T.: *T. capensis* Linnaeus.

(V) *Tulbagia* Linnaeus, Mant. 148, 223. Oct 1771.
(H) *Tulbaghia* Heister, Brunsvig. x. 1753 (etiam vide 1046).

† 1050. **Nothoscordum** Kunth, Enum. **4**: 457. Jul 1843.
T.: *N. striatum* (N. J. Jacquin) Kunth, nom. illeg. [*Ornithogalum bivalve* Linnaeus, *N. bivalve* (Linnaeus) Britton] (*typ. cons.*).

Note 1: Pseudoscordum Herbert, Amaryll. 11 (1837), is a *nomen nudum et provisorium.*

Note 2: Periloba Rafinesque, Fl. Tell. **4**: 87 (1838 med.), based on *Nolana paradoxa* Lindley, is to be removed from this case: it is a Nolanacea.

Note 3: C. V. Morton (Taxon **3**: 21. 1954) demonstrated, to the satisfaction of the Committee for Spermatophyta (see Taxon **7**: 189. 1958), that *Geboscon* Rafinesque, Fl. Tell. **2**: 19 (1837 quadrim. 1), is not a synonym of *Nothoscordum* Kunth (but of *Allium* Linnaeus); conservation is therefore superfluous. Earlier publications of *Geboscon* did refer to *Ornithogalum bivalve* Linnaeus, but were invalid.

1053. **Brodiaea** J. E. Smith, Trans. Linn. Soc. **10**: 2. post Apr 1810.
T.: *B. grandiflora* J. E. Smith, nom. illeg. [*Hookera coronaria* R. A. Salisbury, *B. coronaria* (R. A. Salisbury) Jepson] (*typ. cons.*).

(≡) *Hookera* R. A. Salisbury, Parad. Lond. *t. 98.* 1 Mar 1808.

Note: Hookeria J. E. Smith (Trans. Linn. Soc. **9**: 275. post Apr 1808, MUSCI) was published later than Salisbury's name; Salisbury's plate 100 [sic] having been published on or before 1 Mar 1808.

1055. **Bessera** J. H. Schultes, Linnaea **4**: 121. 1829.
T.: *B. elegans* J. H. Schultes.

(H) *Bessera* J. A. Schultes, Obs. Bot. 27. 1809 [BORAG.].

Note: Other homonyms: *Bessera* C. Sprengel, Pugil. **2**: 90 (1815) [EUPHORB.], and *Bessera* Velloso, Fl. Flum. 147 (1825) [NYCTAG.].

1077. **Lloydia** H. G. L. Reichenbach, Fl. Germ. Excurs. 102. 1830.
T.: *L. serotina* (Linnaeus) H. G. L. Reichenbach (*Anthericum serotinum* Linnaeus).

(H) *Lioydia* Necker, Elem. **1**: 4. 1790 [COMP.].
(≡) *Nectarobothrium* Ledebour, Fl. Altaica **2**: 36. 1830.

Note 1: Lloydia R. A. Salisbury, Trans. Hort. Soc. London **1**: 328 (1812), was not validly published (*nomen nudum*).

Note 2: Rhabdocrinum H. G. L. Reichenbach, Consp. 65 (1828), is also a *nomen nudum*.

Note 3: It is doubtful whether *Lioydia* Necker (1790) is indeed a homonym of *Lloydia*. They have here been treated as orthographic variants, thus making the conservation of *Printzia* Cassini (9059) superfluous (Art. 75, footnote!).

1088. **Eucomis** L'Héritier, Sert. Angl. 11. 1788.
T.: *E. regia* (Linnaeus) L'Héritier (*Fritillaria regia* Linnaeus) (*typ. cons.*).

(≡) *Basilaea* A. L. Jussieu ex Lamarck, Enc. **1**: 382. Aug 1758 ('1783').

1108. **Cordyline** Commerson ex A. L. Jussieu, Gen. 41. 1789 sem. 2.
T.: *C. terminalis* (Linnaeus) Kunth (*Asparagus terminalis* Linnaeus).

(H) *Cordyline* Adanson, Fam. **2**: 54, 543. 1763 prim.
T.: *Aloë hyacinthoides* Linnaeus.
(≡) *Terminalis* Rumphius, Auct. 40. 1755.
(=) *Taetsia* Medikus, Theodora 82. 1786.
T.: *T. ferrea* (Linnaeus) Medikus (*Dracaena ferrea* Linnaeus).

Note: Terminalis Rumphius is doubtfully valid. There is no generic diagnosis. *Descriptio generico-specifica*?

1110. **Sansevieria** Thunberg, Prodr. Pl. Cap. [v], 65. 1794.
T.: *S. thyrsiflora* Thunberg, nom. illeg. [*Aloë hyacinthoides β guineensis* Linnaeus, *Aloë guineensis* N. J. Jacquin, *S. guineensis* (Linnaeus) Willdenow] (*typ. cons.*).

(≡) *Acyntha* Medikus, Theodora 76. 1786.

1111. **Astelia** Banks et Solander ex R. Brown, Prodr. 291. Mar 1810.
T.: *A. alpina* R. Brown.

(=) *Funckia* Willdenow, Mag. Ges. Naturf. Fr. Berlin **2**: 19. 1808.
T.: *F. magellanica* Willdenow, nom. illeg. (*Melanthium pumilum* G. Forster).

1112. **Milligania** J. D. Hooker, Journ. Bot. Kew Misc. **5**: 296. 1853.
T.: *M. longifolia* J. D. Hooker (*typ. cons.*).

(H) *Milligania* J. D. Hooker, Hooker's Ic. Pl. **3**: *t.* 299. 1840 [GUNNER.].

1118. **Smilacina** Desfontaines, Ann. Mus. Hist. Nat. Paris **9**: 51. 1807.
T.: *S. stellata* (Linnaeus) Desfontaines (*Convallaria stellata* Linnaeus) (*typ. cons.*).

(=) *Vagnera* Adanson, Fam. **2**: 496. 1763 prim.
T.: '*Polygonatum* Corn. t. 33. 37. Mor. s. 13. *t. 4* f. 7. 9' (*Convallaria stellata* and *C. racemosa* Linnaeus).
(=) *Polygonastrum* Moench, Meth. 637. 1794.
T.: *P. racemosum* (Linnaeus) Moench (*Convallaria racemosa* Linnaeus).

Note: (=) *Tovaria* Necker, Elem. **3**: 190 (1790) (non *Tovara* Adanson 1763), is illegitimate and also unavailable because of *Tovaria* Ruiz et Pavon 1794 (*nom. cons.*) (3081).

1119. **Maianthemum** Wiggers, Prim. Fl. Hols. 14. 29 Mar 1780.
T.: *M. convallaria* Wiggers, nom. illeg. [*Convallaria bifolia* Linnaeus, *M. bifolium* (Linnaeus) F. W. Schmidt].
(≡) *Valentinia* Heister ex Fabricius, Enum. ed. 2. 37. 1763.
(≡) *Unifolium* Zinn, Catal. 104. Mai 1757 (non Ludwig Inst. ed. 2. 124. post Feb 1757).

Note: (≡) *Unifolium* Zinn, Catal. 104 (Mai 1757), is probably unavailable because of *Unifolium* Ludwig, Inst. ed. 2. 124 (post Feb 1757), which is a totally different genus.

† 1129. **Reineckea** Kunth, Abh. Akad. Berlin Physik. **1842**: 29. 1844.
T.: *R. carnea* (Andrews) Kunth [*Sansevieria carnea* Andrews ('*Sanseviera*')].

Note: Conservation superfluous: *Sanseviella* H. G. L. Reichenbach, Consp. 44 (1828), was not validly published.

1140. **Ophiopogon** Ker-Gawler, Bot. Mag. *t. 1063.* 1 Nov 1807.
T.: *O. japonicus* (Linnaeus f.) Ker-Gawler (*Convallaria japonica* Linnaeus f.).
(=) *Mondo* Adanson, Fam. **2**: 496. 1763 prim.
T.: 'Kaempf. Amoen. t. 824'.

1146. **Luzuriaga** Ruiz et Pavon, Fl. Peruv. Chil. **3**: 65. 1802.
T.: *L. radicans* Ruiz et Pavon.
(=) *Enargea* Banks et Solander ex J. Gaertner, Fruct. **1**: 283. 1788.
T.: *E. marginata* J. Gaertner.
(=) *Callixene* Commerson ex A. L. Jussieu, Gen. 41. 1789 sem. 2.

HAEMODORACEAE

† 1161. **Lachnanthes** S. Elliott, Sketch Bot. S.C. & Ga. **1**: 47. 26 Sep 1816 ('1821').
T.: *L. tinctoria* Elliott.

Note: Conservation superfluous. (=) *Heritiera* J. F. Gmelin, Syst. **2**: 113 (1791), (non W. Aiton 1789) is not available, and *Gyrotheca* Salisbury, Trans. Hort. Soc. London **1**: 327 (1812), is a *nomen nudum.*

AMARYLLIDACEAE

1175. **Nerine** Herbert, Bot. Mag. *t. 2124.* 1 Jan 1820.
T.: *N. sarniensis* (Linnaeus) Herbert (*Amaryllis sarniensis* Linnaeus).
(≡) *Imhofia* Heister, Brunsvig. xx. 1753.

1178. **Vallota** R. E. Salisbury ex Herbert, Appendix [to Bot. Reg. **7**] 29. Dec 1821.
T.: *V. purpurea* Herbert, nom. illeg. [*Crinum speciosum* Linnaeus f., *V. speciosa* (Linnaeus f.) Voss].
(H) *Valota* Adanson, Fam. **2**: 495. 1763 prim. [GRAM.].
T.: *V. insularis* (Linnaeus) Chase (*Andropogon insulare* Linnaeus).

Note: M. L. Green (Kew Bull. **1935**: 528) states that *Vallota* and *Valota* are different names. *Valota* Adans. is still in use (Hitchcock, Chase) and there is no reason why both names should not co-exist! However, by this conservation Article 75 applies and the names are treated as orthographic variants of the same name.

1181. **Zephyranthes** Herbert, Appendix [to Bot. Reg. **7**] 36. Dec 1821.
T.: *Z. atamasco* (Linnaeus) Herbert [*Amaryllis atamasco* Linnaeus ('*atamasca*'), Sp. Pl. 292. 1753] (*typ. cons.*).
(≡) *Atamosco* Adanson, Fam. **2**: 57, 522. 1763 prim.

1211. **Urceolina** H. G. L. Reichenbach, Consp. 61. 1828.
T.: *U. pendula* (Herbert) Herbert (Amaryll. 193. 1837) (*Urceolaria pendula* Herbert) (nom. illeg.) [*Crinum urceolatum* Ruiz et Pavon; *U. urceolata* (Ruiz et Pavon) M. L. Green].
(=) *Leperiza* Herbert, Appendix [to Bot. Reg. **7**] Dec 1821.
T.: *L. latifolia* (Ruiz et Pavon) Herbert (*Pancratium latifolium* Ruiz et Pavon).

Note: (≡) *Urceolaria* Herbert, Appendix 28 (1821), is illegitimate because of *Urceolaria* Willdenow ex Cothenius, Disp. 10 (1790).

1236. **Lanaria** W. Aiton, Hort. Kew. **1**: 462. 1789 trim. 1.
T.: *L. plumosa* W. Aiton, nom. illeg. [*Hyacinthus lanatus* Linnaeus, *L. lanata* (Linnaeus) Druce].
(H) *Lanaria* Adanson, Fam. **2**: 255. 1763 prim. [CARYOPH.].
≡ *Gypsophila* Linnaeus 1753.

Note 1: Argolasia A. L. Jussieu, Gen. 60 (1789 sem. 2), was published later than the conserved name.

Note 2: (≡) *Augea* Thunberg ex Retzius, Obs. **5**: 3 (1789), is a *nomen nudum.*

TACCACEAE

1248. **Tacca** J. R. et G. Forster, Char. Gen. Pl. 69. 1776.
T.: *T. pinnatifida* J. R. et G. Forster.
(=) *Leontopetaloides* Boehmer in Ludwig, Def. Gen. Pl. 512. 1760.

DIOSCOREACEAE

1258. **Petermannia** F. Mueller, Fragm. **2**: 92. Aug 1860.
T.: *P. cirrosa* F. Mueller.
(H) *Petermannia* H. G. L. Reichenbach, Nom. 236. Jul. 1841 [CHEN.].

IRIDACEAE

1260. **Syringodea** J. D. Hooker, Bot. Mag. *t. 6072.* 1 Dec 1873.
T.: *S. pulchella* J. D. Hooker.
(H) *Syringodea* D. Don, Edinburgh New Philos. Journ. **17**: 155. 1834 [ERIC.].
T.: *S. vestita* (Thunberg) D. Don (*Erica vestita* Thunberg).

1261. **Romulea** Maratti, Pl. Rom. Sat. 13. 1772.
T.: *R. bulbocodium* (Linnaeus) Sebastiani et Mauri (*Crocus bulbocodium* Linnaeus) (*typ. cons.*).
(≡) *Ilmu* Adanson, Fam. **2**: 497. 1763 prim.

Note: (≡) *Bulbocodium* P. Miller, Gard. Dict. Abr. ed. 4. (1754), is unavailable because of *Bulbocodium* Linnaeus 1753.

1265. **Moraea** P. Miller, Fig. Pl. 159. *t. 238.* 27 Jun 1758 ('*Morea*'); corr. Linnaeus, Sp. Pl. ed. 2. 59. Sep 1762.
T.: *M. juncea* Linnaeus (*typ. cons.*).
(V) *Morea* P. Miller, Fig. Pl. 159. *t. 238.* 27 Jun 1758.

1283. **Libertia** C. Sprengel, Syst. **1**: 127. 1824 sero.
T.: *L. ixioides* (G. Forster) C. Sprengel (*Sisyrinchium ixioides* G. Forster).

(H) *Libertia* Dumortier, Comment. 9. 1823 [LILIAC.].
T.: *L. recta* Dumortier, nom. illeg. (*Hemerocallis caerulea* Andrews).
(=) *Tekel* Adanson, Fam. **2**: 497. 1763 prim.
T.: 'Feuillé t. 4'.

1284. **Bobartia** Ker-Gawler, Irid. Gen. 29. 1827.

(H) *Bobartia* Linnaeus, Sp. Pl. 54. 1753 [CYPER.].
T.: *B. indica* Linnaeus.

Note 1: Hecaste Solander ex Schumacher, Skr. Naturh. Selsk. Kjøbenh. **3** (1): 10 (1793) was not validly published because Schumacher did not accept this name.

Note 2: The publication of the generic name by R. A. Salisbury, Trans. Hort. Soc. London **1**: 313 (1812), cannot be considered for conservation because there is no generic description and because Salisbury presumably continues the use of *Bobartia* Linnaeus. Ker-Gawler (1827) gives a diagnosis and for purposes of conservation his usage of the name *Bobartia* may be treated as new. The type-species has no legitimate name because both Salisbury and Ker-Gawler cite *Bobartia indica* Linnaeus in the synonymy. According to J. G. Baker this should apply to only a part of the Linnean taxon but nevertheless there is no legitimate name. *Bobartia juncea* Salisbury is illegitimate because both *Bobartia indica* Linnaeus and *Moraea spathacea* Linnaeus f. are cited, and *Bobartia spathacea* (Linnaeus f.) Ker-Gawler is illegitimate because *Bobartia indica* is cited without any indication of "ex parte." Baker (l.c.) also cites *Xyris altissima* Loddiges as a taxonomic synonym and if this is still thought to be the case this should be the basionym for the correct name of the type species.

1285. **Belamcanda** Adanson, Fam. **2**: 60 [*Belam-Canda*], 524 [*Belamkanda*]. 1763; corr. Medikus, Philos. Bot. **1**: 173. 1789.
T.: *B. chinensis* (Linnaeus) A. P. Decandolle (in Redouté, Lil. **3**: *t. 121.* 1805) (*Ixia chinensis* Linnaeus) (*typ. cons.*).

(V) *Belam-Canda* Adanson, Fam. **2**: 60. 1763.
(≡) *Gemmingia* Heister ex Fabricius, Enum. ed. 2. 27. 1763.

Note: Unless the name is conserved in the spelling as corrected by Medikus the spelling would have to be Belam-Canda. Apart from that the conservation is hardly necessary: *Gemmingia* Heister is valid only if the original Heister diagnosis can be traced (not seen by us); Fabricius simply enumerates specific "names" (phrases). Furthermore Adanson's *Familles* may have appeared late in 1762 or early in 1763, probably before Fabricius' book.

1289. **Patersonia** R. Brown, Bot. Mag. *t. 1041.* 1 Aug 1807.
T.: *P. sericea* R. Brown.

(=) *Genosiris* Labillardière, Nov. Holl. Pl. Spec. **1**: 13. 1804.
T.: *G. fragilis* Labillardière.

† 1292. **Eleutherine** Herbert, Bot. Reg. **29**: *t.* 57. 1 Nov 1843.
T.: *E. bulbosa* (P. Miller) Urban (Repert. Sp. Nov. **15**: 305. 1918) (*Sisyrinchium bulbosum* P. Miller).

Note 1: Conservation superfluous: *Galatea* Salisbury, Trans. Hort. Soc. London **1**: 310 (1812), is a *nomen nudum.*

Note 2: For the legitimate name of the type species see Urban, Repert. Sp. Nov. **15**: 305 (1918).

1302. **Ixia** Linnaeus, Sp. Pl. ed. 2. 51. Sep 1762.
T.: *I. polystachya* Linnaeus ('*polystachia*') (*typ. cons.*).

(H) *Ixia* Linnaeus, Sp. Pl. 36. 1753 [IRID.].

1313. **Micranthus** (Persoon) Ecklon, Verz. Pfl. 43. 1827.
T.: *M. alopecuroides* (Linnaeus) Ecklon (*Gladiolus alopecuroides* Linnaeus) (*typ. cons.*).

(H) *Micranthus* J. C. Wendland, Bot. Beob. 38. 1798 [ACANTH.].
T.: *M. oppositifolius* J. C. Wendland.
≡ *Phaulopsis* Willdenow 1800 corr. C. Sprengel 1817 (*nom. cons.*) (7932).

Note 1: Other homonyms: *Micranthus* Roth, Nov. Pl. Sp. 282 (1821) [LYTHR.]; *Micranthes* Haworth, Syn. Pl. Succ. 320 (1812) (homon. ?).

Note 2: (=) *Beilia* Ecklon 1827 is a *nomen nudum.*

1315. **Watsonia** P. Miller, Gard. Dict. ed. 7. 1759.
T.: *W. meriana* (Linnaeus) P. Miller (Gard. Dict. ed. 8. 1768) (*Antholyza meriana* Linnaeus).

(≡) *Meriana* Trew, Pl. Sel. Pinx. Ehret 11. *t. 40.* 1754.
nom. rej. vs. *Meriania* Swartz 1800 (*nom. cons.*) (5692).

Note: *Watsonia* P. Miller was superfluous on publication and the conservation must stand notwithstanding the circumstance that (≡) *Meriana* Trew (1754) is now unavailable because of *Meriania* Swartz (1800) (*nom. cons.*).

MUSACEAE

1321. **Heliconia** Linnaeus, Mant. 147, 211. Oct 1771.
T.: *H. bihai* (Linnaeus) Linnaeus (*Musa bihai* Linnaeus).

(≡) *Bihai* P. Miller, Gard. Dict. Abr. ed. 4. 1754.

ZINGIBERACEAE

1324. **Zingiber** Boehmer in Ludwig, Def. Gen. Pl. 89. 1760.
T.: *Z. officinale* Roscoe (Trans. Linn. Soc. **8**: 358. 1807) (*Amomum zingiber* Linnaeus).

(H) *Zinziber* P. Miller, Gard. Dict. Abr. ed. 4. [ZINGIB.] 1754.

1328. **Alpinia** Roxburgh, Asiat. Res. **11**: 350. 1810.
T. *A. galanga* (Linnaeus) Willdenow (Sp. Pl. **1**: 12. 1797) (*Maranta galanga* Linnaeus) (*typ. cons.*).

(H) *Alpinia* Linnaeus, Sp. Pl. 2. 1753 [ZINGIB.].
T.: *A. racemosa* Linnaeus.

Note: (=) *Languas* C. Konig (in Retzius, Obs. **3**: 64. 1783) is a *nomen nudum. Alpinia* Linnaeus (1753) is also to be rejected in favour of *Renealmia* Linnaeus f. (1781) (*nom. cons.*) (1331).

1331. **Renealmia** Linnaeus f., Suppl. 7, 79. 1781 sem. 2.
T.: *R. exaltata* Linnaeus f.

(H) *Renealmia* Linnaeus, Sp. Pl. 286. 1753 [BROMEL.].
LT.: *R. paniculata* Linnaeus.

Note 1: Another homonym: *Renealmia* Houttuyn, Nat. Hist. ser. 2. **8**: 335 (1777) [GENTIAN.] (see also under no. 6544).

Note 2: (=) *Alpinia* Linnaeus 1753 is unavailable because of *Alpinia* Roxburgh 1810 (*nom. cons.*) (1328).

1332. **Riedelia** Oliver, Hooker's Ic. Pl. **15**: 15. Mar 1883.
T.: *R. curviflora* Oliver.

(H) *Riedelia* Chamisso, Linnaea **7**: 240 ('224'). 1832 [VERBEN.].
T.: *R. lippioides* Chamisso.
(=) *Nyctophylax* Zippelius, Alg. Konst Letterb. **1829** (1): 298. 8 Mai 1829.

Note: Another homonym: *Riedelia* Meisner in C. F. P. Martius, Fl. Bras. **7**: 171 (1863) [ERIC.]. *Riedelia* Trinius ex Kunth, Enum. **1**: 515 (1833), was not validly published.

† 1360. **Tapeinochilos** Miquel, Ann. Mus. Lugd. Bat. **4**: 101. 1869 ('1868').
T.: *T. pungens* (Teysmann et Binnendijk) Miquel (*Costus pungens* Teysmann et Binnendijk).

Note 1: Conservation superfluous: *Tubu tubu* Rumphius (two words), was a vernacular name of a species.

Note 2: The original spelling of this name is *Tapeinochilos*, which should be retained. Conservation with a changed ending was presumably not intended.

MARANTACEAE

1368. **Phrynium** Willdenow, Sp. Pl. **1**: 17. 1797.
T.: *P. capitatum* Willdenow.
(=) *Phyllodes* Loureiro, Fl. Cochinch. 13. 1790.
T.: *P. placentaria* Loureiro.

Note: Phrynium Loefling 1758 was not validly published (see 924).

CORSIACEAE

1386. **Arachnitis** R. Philippi, Bot. Zeit. **22**: 217. 15 Jul 1864.
T.: *A. uniflora* R. Philippi.
(H) *Arachnites* F. W. Schmidt, Fl. Boëm. **1**: 74. 1793 [ORCHID.].

ORCHIDACEAE

1393a. **Paphiopedilum** Pfitzer, Morph. Stud. Orch. 11. 1886.
T.: *P. insigne* (Wallich ex Lindley) Pfitzer (*Cypripedium insigne* Wallich ex Lindley) (*typ. cons.*).
(≡) *Cordula* Rafinesque, Fl. Tell. **4**: 46. 1838 med. ('1836').
(=) *Stimegas* Rafinesque, Fl. Tell. **4**: 45. 1838 med. ('1836').
T.: *S. venustum* (Sims) Rafinesque (*Cypripedium venustum* Wallich ex Sims).

1397. **Serapias** Linnaeus, Sp. Pl. 949. 1753.
T.: *S. lingua* Linnaeus (*typ. cons.*, etiam vide Swartz, Vet.-akad. Nya Handl. Stockholm **21**: 224. 1800 trim. 3).

Note: Conservation on account of typification; the historical type is *S. helleborine* Linnaeus.

1408. **Holothrix** L. C. Richard ex Lindley, Gen. Sp. Orch. Pl. 257. Aug 1835; 283. Sep 1835.
T.: *H. parvifolia* Lindley, nom. illeg. [*Orchis hispidula* Linnaeus f., *H. hispidula* (Linnaeus f.) Durand et Schinz] (*typ. cons.*).
(=) *Scopularia* Lindley, Bot. Reg. **20**: sub *t. 1701.* 1 Sep 1834 ('1835').
T.: *S. burchellii* Lindley.
(=) *Monotris* Lindley, Gen. Sp. Orch. Pl. 303. Oct 1835 ('1835').
T.: *M. secunda* Lindley.
(=) *Tryphia* Lindley, Gen. Sp. Orch. Pl. 258. Aug, 333. Oct 1835.
T.: *T. secunda* (Thunberg) Lindley (*Orchis secunda* Thunberg).
(=) *Saccidium* Lindley, Gen. Sp. Orch. Pl. 258. Aug, 301. Oct 1835.
T.: *S. pilosum* Lindley.

† 1410. **Platanthera** L. C. Richard, Orch. Eur. Annot. 20, 26, 35. 1817; Mém. Mus. Hist. Nat. Paris **4**: 42, 48, 57. 1818.
T.: *P. bifolia* (Linnaeus) L. C. Richard (*Orchis bifolia* Linnaeus).

Note: Conservation superfluous: *Lysias* Salisbury, Trans. Hort. Soc. London **1**: 288 (1812), is a *nomen nudum.*

1430. **Satyrium** Swartz, Vet.-akad. Handl. Stockholm ser. 2. **21**: 214. 1800.
T.: *S. bicorne* (Linnaeus) Thunberg (Prodr. 6. 1794) (*Orchis bicornis* Linnaeus) (*typ. cons.*).
(H) *Satyrium* Linnaeus, Sp. Pl. 924. 1753 [ORCHID.].
LT.: *S. viride* Linnaeus (vide M. L. Green, Prop. Brit. Bot. 185. 1929).

1449. **Pterostylis** R. Brown, Prodr. 326. Mar 1810.
T.: *P. curta* R. Brown (*typ. cons.*).
(=) *Diplodium* Swartz, Ges. Naturf. Freunde Berlin Mag. **4**: 84. 1810.
T.: *Disperis alata* Labillardière (Nov. Holl. Pl. Spec. **2**: 59. 1806).

1468. **Nervilia** Commerson ex Gaudichaud in Freycinet, Voy. Monde Bot. 421. Sep 1829.
T.: *N. aragoana* Gaudichaud (*typ. cons.*).
(=) *Stellorkis* Thouars, Nouv. Bull. Soc. Philom. **1**: 317. 1809.
T.: *Arethusa simplex* Linnaeus (vide Thouars, Hist. Pl. Orch. *tabl. t. 24*).

Note: Stellorchis Thouars (1809) ('*Stellorkis*'), orth. mut. Hist. Pl. Orch. *table. t. 24.* (1819-1822), is an illegitimate variant spelling.

1482. **Epipactis** Zinn, Catal. 85. Mai 1757.
T.: *E. helleborine* (Linnaeus) Crantz Stirp. Austr. ed. 2. 467. 1769) (*Serapias helleborine* Linnaeus) (*typ. cons.*).
(=) *Helleborine* P. Miller, Gard. Dict. Abr. ed. 4. 1754.

Note: Serapias Linnaeus (1753) is now conserved with its second species as type (1397).

1483. **Limodorum** L. C. Richard, Orch. Eur. Annot. 20, 28, 36. 1817; Mém. Mus. Hist. Nat. Paris **4**: 42, 50, 58. 1818.
T.: *L. abortivum* (Linnaeus) Swartz (Nova Acta Soc. Sci. Upsal. **6**: 80. 1799) (*Orchis abortiva* Linnaeus).
(H) *Limodorum* Linnaeus, Sp. Pl. 950. 1753 [ORCHID.].
T.: *L. tuberosum* Linnaeus.

1488. **Pelexia** Poiteau ex Lindley, Bot. Reg. **12**: *t. 985.* 1 Jun 1826.
T.: *P. spiranthoides* Lindley, nom. illeg. [*Satyrium adnatum* Swartz, *P. adnata* (Swartz) C. Sprengel].
(≡) *Collea* Lindley, Bot. Reg. **9**: sub *t. 760.* 1 Dec 1823.

Note: The earlier publication of *Pelexia* Poiteau ex L. C. Richard, Mém. Mus. Hist. Nat. **4**: 59 (1818) was not valid (no generic description).

† 1490. **Spiranthes** L. C. Richard, Orch. Eur. Annot. 20, 28, 36. 1817; Mém. Mus. Hist. Nat. Paris **4**: 42, 50, 58. 1818.
T.: *S. autumnalis* L. C. Richard, nom. illeg. [*Ophrys spiralis* Linnaeus, *S. spiralis* (Linnaeus) K. Koch].

Note: Conservation superfluous: *Gyrostachis* [sic] Persoon, Syn. Pl. **2**: 511 (1807), was not accepted by Persoon himself, and *Ibidium* Salisbury, Trans. Hort. Soc. London **1**: 291 (1812), is a *nomen nudum.*

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IXth INTERNATIONAL BOTANICAL CONGRESS MONTREAL 1959

RESOLUTIONS ACCEPTED BY THE PLENARY SESSION *

1. The IXth International Botanical Congress accepts the decisions with regard to, and the amendments of, the International Code of Botanical Nomenclature as passed by the Section on Nomenclature in its sessions held August 16-19, 1959, and affirms the appointment of the various Nomenclature Committees.

2. Whereas the Nomenclature Session of the IXth International Botanical Congress is aware of the inconvenience to a large number of users of plant names caused by changes in the nomenclature of a number of species which are important economic plants, plants often used as test-book examples, and plants that have been the subject of important scientific work; and whereas this Section is therefore willing to co-operate with all those interested in bringing about the stabilization of these plant names; and whereas, in order that the Section may ascertain the number and identity of the species involved, all organizations and all persons are invited to send to the General Committee lists of plant names for which stabilization seems important, whether or not these names are now threatened, each name appearing on these lists being accompanied by a statement of the general importance of the species; and whereas the Committee will set up an organization to study these lists and will report to the next International Botanical Congress, the IXth International Botanical Congress expresses the hope that all those concerned will give scientific and financial support for this important and difficult task.

3. The IXth International Botanical Congress recommends to the International Union of Biological Sciences (IUBS) that measures be taken to support type culture collections of algae.

4. The IXth International Botanical Congress endorses and urges the initiation of a Flora Neotropica, a monographic flora of the New World Tropics, along the lines proposed to and approved by the UNESCO Advisory Committee on Research in The Humid Topics at their meeting in Manaus, July 1957, to co-ordinate and encourage the scattered monographic taxonomic work now being done on the plants of this area, and to encourage those now working on groups for a more limited area to enlarge their areas to include the entire New World Tropics.

* The report of the Resolution Committee, accepted by the plenary session of the Congress, contained nine resolutions and a vote of thanks of which the first six resolutions are here reproduced, being most closely related to the subject matter of this journal.

23 OCT 1959

5. Considering that the rapid expansion of urban sites, highways, and agricultural utilization has resulted in a serious reduction in natural habitats left undisturbed, and that while some countries have duly recognized the value of nature reserves other countries have made little provision for such measures, and because the Congress feels it should raise a strong voice against any indiscriminate destruction of natural habitats, the IXth International Botanical Congress thus entreats all governments to set aside or to extend nature reserves in which the unmolested nature conditions and processes in flora and fauna may be observed and studied.

6. While fully recognizing the necessity of strict control of the transfer of living plant specimens between countries, and while supporting such measures and their improvement, and the Congress being aware of the necessity of free, rapid and unhindered transmission of plant specimens required for the work of recognized botanical gardens and other institutions working in biological science, the IXth International Botanical Congress recommends to all governments that suitable provisions be made to avoid unnecessary delay and damage to such specimens.

REPORT OF THE COMMITTEE ON FUTURE CONGRESSES

This committee of the IXth International Botanical Congress, noting that the continually increasing size and complexity of successive International Congresses reflect the growth and diversification of botanical science, consider that at future congresses steps must be taken to limit the amount of material presented. We believe that the most fruitful expenditure of time at such a congress is in the presentation of interdisciplinary topics and in discussion. We believe also that it is the task of a general Botanical Congress, in contrast to more specialized meetings, to develop common interests between those concerned with the different branches of pure and applied botany.

We therefore submit the following recommendation in respect of the Xth Congress:

1. That the Xth International Botanical Congress be held in 1964 in Europe, and, unless circumstances prevent it, in Brussels, in acceptance of the invitation from the Belgian Ministry of Agriculture, transmitted by Dr. W. Robyns. *

2. That a standing Committee be appointed to advise on the organization of the subject matter of the Congress.

3. That this committee send out a questionnaire in which those who intend to take part in the Congress will be asked to give particulars of papers of 30-45 minutes' duration which they wish to present, in order of their preference. The Committee should then select those which it considers most suitable but may in addition extend invitations to others who have not submitted titles.

4. That abstracts of the selected papers be published before the Congress and sent to those who have indicated their intention to participate. At the Congress each of the papers should be followed by an open discussion in which any of those present may take part.

5. That short communications may be submitted but will not be read at the Congress. Instead they should be published in abstract form before the Congress. Time for discussion of these short papers, probably in groups, should be provided during the Congress. In addition, facilities should be made available for those who offer short papers to present their material in the form of demonstrations, illustrated by specimens, preparations, photographs or diagrams.

* This recommendation was slightly amended by the Plenary Session.

6. That where possible the mornings be devoted to Symposia or General Sessions, and the afternoons to demonstrations and discussions, whether organized or spontaneous.

7. That in selecting the topics of the Symposia and Discussions, emphasis be given to subjects which border on two or more primarily botanical disciplines, or to newly developing fields of research.

8. That these subjects be selected by the standing committee to advise on the organization of the Congress, and be circulated not less than 18 months before the Congress to the International Botanical Associations, for criticism and for suggestions as to participating personnel.

9. That ordinarily no person should present more than one verbal communication.

10. That the dual functions of making the final decision on the location of the Xth Congress, and of acting as standing committee to advise on the organization of its subject matter, be undertaken by the Division of Botany of the International Union of Biological Sciences.

In closing, this Committee desires to go on record as expressing its great satisfaction with the organization of the IXth Congress, and as offering, in the name of the participants, its profound thanks to the Canadian organizing Committee.

NOMENCLATURE SECTION

The following decisions were taken by the Nomenclature Section of the Montreal Congress. This report is only a preliminary one, it may contain some errors and it omits decisions taken on items not specifically printed as proposals in the "Synopsis". The complete and final information on all decisions will be given in the official report of the section.

The proposals listed below were all printed in the "Synopsis of Proposals" (Regnum Vegetabile vol. 14) and reported upon in Taxon 8: 133 (1959) where the results of the preliminary vote were given. For purposes of reference the results of this preliminary vote are repeated here in parentheses, the sequence of the numbers being "yes", "no" and "committee".

All decisions on nomenclature taken at the Montreal Congress were by *simple* majority. In most cases a simple show of voting cards was sufficient to indicate the sense of the meeting, but in a few instances counted votes were taken.

Amendments to the original proposals, made from the floor and adopted, are not given here, they will be found in the final report.

The section decided not to take into consideration proposals which had reached the Rapporteur's office after 1 December 1958 (the official deadline was 1 September 1958) unless these proposals were moved again from the floor.

Preamble
A (10: 17: 183) *Editorial Committee*

Principle I
A (23: 19: 162) *Accepted* (amended)

Principle III
A (43: 153: 6) *Accepted* (amended)

Principle IV (amendment Fosberg/Ross, *accepted*)
A (22: 191: 1) Rejected
B (10: 202: 2) Rejected
C (8: 198: 1) Rejected

Principle V
A (3: 215: 0) Rejected
B (171: 52: 0) *Editorial Committee*
C (29: 188: 0) Withdrawn

Principle VII
A (184: 25: 11) Rejected

Principle VIII
A (103: 99: 8) Rejected
B (119: 71: 8) Rejected

Principle IX
A (191: 16: 16) Rejected

Article 1
A (4: 219: 2) Rejected

Article 2
A (4: 222: 1) Rejected

Article 3
A (5: 220: 2) Rejected

Article 4
A (19: 195: 1) Rejected
B (16: 198: 0) Rejected
C (21: 164: 31) Rejected
D (16: 194: 1) Rejected
E (9: 202: 0) Rejected

Recommendation 4A
A (201: 8: 6) *Accepted*

Article 5
A (10: 27: 161) *Committee for Fungi* and *Editorial Committee*
B (121: 66: 21) Rejected
C (2: 214: 1) Rejected

Article 6
A (159: 4: 43) *Accepted*

Article 7
A (214: 14: 0) *Accepted*
B (17: 221: 0) Rejected
C (8: 15: 181) *Palaeobotanical Committee* (*accepted*, amended)
D (70: 26: 119) *Editorial Committee*
E (14: 15: 172) *Palaeobotanical Committee* (*accepted*, amended)
F (55: 160: 1) Rejected
G (170: 44: 11) *Editorial Committee*
H (56: 171: 2) Rejected (special committee on neotypes established)
I (205: 16: 4) *Editorial Committee*
K (145: 56: 5) *Accepted*
L (186: 30: 3) *Accepted*
M (18: 205: 0) Rejected
N (135: 79: 1) *Accepted*

Article 8
A (3: 223: 0) Rejected
B (36: 178: 4) *Editorial Committee*

Recommendation 8A
A (0: 180: 33) *Editorial Committee*

Recommendation 8B
A (6: 173: 36) *Editorial Committee*

Recommendation 8C
A (200: 15: 3) *Accepted*
B (5: 176: 35) *Editorial Committee*

Recommendation 8D
A (5: 171: 34) *Editorial Committee*

Recommendation 8E
A (0: 180: 35) *Editorial Committee*
B (196: 11: 24) *Accepted*

Article 9
A (12: 18: 188) *Editorial Committee*

Article 10
A (23: 148: 40) *Accepted*
B (104: 113: 9) Rejected
C (69: 149: 4) *Editorial Committee*
D (8: 22: 189) *Editorial Committee*

Article 10bis
A (48: 144: 23) Rejected

Article 11
A (189: 9: 15) *Editorial Committee*
B (209: 11: 5) *Accepted*

Article 13
A (21: 24: 30) *Committee for Fungi*
B (8: 20: 31) Rejected (awaiting further study by Committee for Algae)
C (19: 7: 34) *Accepted* (as recommended by C.f. Bryophytes)
D (4: 23: 34) Rejected (as recommended by C.f. Bryophytes)
E (3: 23: 156) *Editorial Committee*
F (18: 33: 133) Rejected (possibility for special provision for Fungi left open)

Article 14
A (45: 171: 1) Rejected*
B (15: 188: 3) Rejected
C (3: 161: 35) Rejected
D (7: 158: 36) Rejected
E (4: 155: 42) Rejected
F (8: 199: 5) Rejected
G (11: 189: 1) Rejected
H (197: 16: 2) *Accepted*
I (198: 15: 0) *Accepted*

Article 14bis
A (91: 112: 4) Rejected*

Article 15
A (177: 10: 30) *Accepted*
B (12: 80: 113) Rejected

Recommendation 15A
A (204: 10: 1) *Accepted*

Recommendation 16A
A (17: 185: 1) Rejected
B (14: 193: 1) Rejected

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* However see resolution no. 2 adopted by the Congress and reprinted on p. 245 of this issue of Taxon (Motion Lanjouw, McVaugh, Ross).

Article 17

A (185: 31: 3) *Accepted* (amended)
B (7: 207: 3) Rejected
C (145: 72: 2) *Accepted*
D (46: 156: 0) Withdrawn
E (210: 10: 0) *Accepted*

Article 18

A (5: 213: 2) Rejected
B (10: 210: 1) Rejected
C (196: 18: 4) *Accepted*
D (125: 75: 15) *Accepted* (amended)
E (94: 41: 77) *Accepted*
F (53: 35: 126) *Accepted*
G (169: 43: 2) *Accepted*
H (17: 199: 0) Rejected
I (4: 199: 5) Rejected

Recommendation 18A

A (12: 197: 6) Rejected

Article 19

A (6: 211: 1) Withdrawn
B (7: 204: 1) Rejected
C (133: 71: 4) *Accepted*
D (5: 203: 1) Rejected

Article 20

A (183: 12: 28) *Accepted*
B (203: 18: 3) *Accepted* (amended)
C (57: 144: 6) Withdrawn

Article 21

A (191: 2: 16) *Accepted*
B (189: 10: 7) *Accepted*
C (196: 15: 5) *Accepted*

Recommendation 21A

A (36: 10: 164) *Editorial Committee*

Article 22

A (10: 212: 0) Rejected
B (15: 198: 1) Rejected

Recommendation 22B

A (3: 10: 197) *Editorial Committee*

Recommendation 22C

A (1: 223: 0) Rejected

Article 23

A (16: 195: 2) Rejected
B (199: 11: 11) *Accepted*
C (179: 29: 12) *Accepted*
D (12: 12: 181) *Editorial Committee*

Recommendation 23B

A (30: 39: 146) *Editorial Committee*

Article 24

A (19: 44: 150) *Editorial Committee*
B (175: 27: 13) *Accepted*
C (190: 9: 12) *Accepted*

Article 26

A (9: 210: 0) Rejected
B (132: 42: 42) *Editorial Committee*

Recommendation 26A

A (1: 220: 0) Rejected

Article 27

A (175: 23: 13) *Accepted*

Article 29

A (8: 25: 178) *Accepted as a recommendation*
B (9: 11: 194) *Editorial Committee*

Recommendation 29A

A (6: 28: 178) *Editorial Committee*
B (13: 183: 14) Rejected

Article 31

A (21: 14: 172) *Editorial Committee*

Article 31bis

A (5: 216: 2) Rejected

Article 31ter

A (8: 211: 3) Rejected

Section 2

A (32: 180: 9) Rejected

Article 32

A (4: 216: 0) Rejected
B (20: 13: 173) *Palaeobotanical Committee* (*Accepted*)
C (18: 21: 170) *Palaeobotanical Committee* (Rejected)
D (18: 8: 181) *Editorial Committee*
E (174: 31: 11) *Accepted*
F (158: 56: 4) Rejected
G (188: 32: 3) *Accepted* (amended)
H (201: 20: 2) *Accepted*
I (8: 209: 1) Rejected
K (200: 20: 3) *Accepted*

Article 33

A (46: 129: 12) Rejected (but E.C. to find a new example)
B (1: 33: 172) *Editorial Committee*
C (11: 71: 27) Rejected

Article 34

A (18: 200: 3) Withdrawn
B (25: 16: 166) *Palaeobotanical Committee* (*Accepted*)
C (15: 15: 175) *Palaeobotanical Committee and C.f. Algae*
D (14: 21: 172) *Palaeobotanical Committee and C.f. Algae*
E (32: 182: 3) Rejected

Recommendation 34A

A (163: 53: 5) *Accepted* (amended)

Article 35

A (24: 9: 168) *Palaeobotanical Committee* (*Accepted*)
B (22: 14: 170) *Palaeobotanical Committee* (Rejected)
C (2: 58: 132) *Accepted* (amended)

Recommendation 35B
A (180: 40: 5) *Accepted*

Article 35bis
A (5: 219: 1) Rejected

Article 36
A (22: 12: 167) *Palaeobotanical Committee (Accepted)*
B (10: 20: 172) *Palaeobotanical Committee* (Rejected)
C (4: 23: 173) *Palaeobotanical Committee* (Rejected)
D (24: 9: 164) *Palaeobotanical Committee (Accepted)*

Article 37
A (8: 208: 3) Rejected

Article 39
A (30: 2: 172) *Palaeobotanical Committee (Accepted)*
B (13: 18: 175) *Editorial Committee*

Article 40
A (6: 7: 184) Article to be deleted (at request of C.f. Hybrids)

Article 41
A (14: 4: 191) *Editorial Committee*

Recommendation 41A
A (178: 16: 22) *Accepted*

Article 42
A (157: 64: 3) Rejected
B (5: 204: 4) Rejected
C (23: 21: 165) *Editorial Committee*
D (45: 14: 151) *Accepted*

Recommendation 42A
A (1: 222: 0) Rejected

Article 43
A (3: 195: 8) Rejected

Article 44
A (56: 16: 144) *Editorial Committee*

Article 45
A (212: 7: 5) *Accepted*
B (6: 34: 26) *General Committee*
C (195: 11: 8) *Accepted*

Recommendation 45C
A (216: 4: 0) *Accepted*

Recommendation 45G
A (65: 154: 2) Rejected

Article 46
A (31: 14: 163) *Accepted*
B (8: 186: 16) Rejected
C (6: 58: 146) *Editorial Committee*

Recommendation 46A
A (105: 87: 14) *Editorial Committee*
B (6: 213: 0) Rejected
C (12: 207: 1) Rejected
D (9: 210: 2) Rejected

Recommendation 46B
A (91: 28: 100) *Accepted*
B (46: 172: 1) Rejected
C (2: 209: 6) Rejected
D (2: 110: 5) Rejected
E (3: 194: 19) Rejected

Recommendation 46C
A (4: 202: 10) Rejected

Article 47
A (9: 24: 171) *Editorial Committee*

Recommendation 47A
A (19: 184: 10) Rejected
B (29: 94: 96) Rejected

Recommendation 47B
A (75: 54: 95) Rejected

Recommendation 47C
A (11: 199: 4) Rejected

Article 48
A (197: 19: 2) *Accepted*
B (56: 116: 36) *Editorial Committee*
C (14: 179: 13) Rejected

Article 49
A (6: 120: 92) Rejected

Recommendation 49A
A (4: 119: 97) Rejected

Recommendation 49B
A (11: 101: 102) Rejected
B (15: 96: 103) Rejected

Article 50
A (0: 64: 144) Rejected

Recommendation 50A
A (7: 172: 40) Rejected
B (14: 16: 176) *Editorial Committee*

Recommendation 50B
A (24: 170: 20) Rejected

Recommendation 50C
A (1: 220: 2) Rejected

Recommendation 50D
A (133: 79: 9) *Accepted*
B (6: 201: 1) Rejected
C (1: 186: 35) Rejected
D (8: 199: 2) Rejected

Recommendation 50Dbis
A (32: 64: 12) C's f. Algae (rejected), Bryo. (rejected), Fungi

Recommendation 50G
A (2: 156: 48) *Editorial Committee*

Recommendation 50H
A (193: 19: 3) *Accepted*

Article 51
A (34: 163: 15) Rejected
B (5: 11: 189) *Editorial Committee*
C (5: 29: 168) *Editorial Committee*

Article 52
A (6: 36: 167) *Editorial Committee*
B (18: 9: 184) *Editorial Committee*

Article 53
A (7: 14: 186) *Editorial Committee*

Article 55
A (10: 14: 183) *Editorial Committee*
B (7: 19: 179) *Editorial Committee*
C (4: 3: 197) *Editorial Committee*
D (2: 14: 188) *Editorial Committee*
E (19: 3: 187) *Editorial Committee*

Article 57
A (18: 6: 186) *Editorial Committee*
B (8: 13: 189) *Editorial Committee*

Article 58
A (17: 8: 176) *Palaeobotanical Committee (Accepted)*

Article 59
A (6: 119: 65) *Committee for Fungi*
B (136: 28: 28) *Committee for Fungi*

Article 60
A (17: 11: 177) *Editorial Committee*
B (9: 202: 2) Rejected

Article 61
A (2: 206: 1) Rejected
B (10: 199: 1) Rejected

Article 62
A (12: 6: 192) *Editorial Committee*

Article 62bis
A (93: 130: 2) Rejected

Article 63
A (136: 50: 36) *Editorial Committee*
B (14: 72: 121) Rejected

Article 64
A (8: 209: 0) Rejected
B (9: 38: 21) *Committee for Algae* (amendment accepted)
C (189: 28: 2) *Accepted*
D (211: 8: 2) *Accepted*
E (6: 4: 196) *Editorial Committee*
F (9: 5: 192) *Editorial Committee*

Article 65
A (91: 125: 2) Rejected
B (5: 29: 163) *Editorial Committee*
C (77: 75: 57) Rejected
D (66: 84: 37) Rejected

Article 66
A (100: 121: 0) Rejected
B (68: 142: 1) Withdrawn
C (65: 95: 23) Rejected

Article 67
A (11: 101: 1) Rejected
B (52: 129: 6) *General Committee*
C (58: 140: 3) *General Committee*

Article 68
A (50: 79: 68) Rejected
B (61: 143: 4) Withdrawn
C (131: 46: 21) *Accepted*

Article 69
A (7: 63: 138) *Editorial Committee*
B (154: 33: 22) *Accepted*

Article 70
A (9: 206: 0) Rejected
B (148: 32: 27) *Accepted*

Article 71
A (4: 29: 173) *Editorial Committee*

Article 73
A (13: 9: 179) *Editorial Committee*
B (133: 23: 56) *Accepted*
C (35: 5: 165) *Editorial Committee*
D (6: 187: 13) Rejected
E (18: 178: 11) Rejected
F (35: 28: 121) *Editorial Committee*
G (34: 109: 54) Rejected
H (40: 101: 55) Rejected
I (10: 27: 166) *Editorial Committee*
K (15: 16: 170) *Editorial Committee*
L (20: 10: 172) *Editorial Committee*
M (18: 11: 173) *Editorial Committee*
N (17: 17: 168) *Editorial Committee*
O (18: 14: 174) *Editorial Committee*

Recommendation 73C
A (20: 24: 160) *Editorial Committee*

Recommendation 73H
A (16: 15: 156) *Committee for Fungi*

Recommendation 73I
A (49: 141: 21) Rejected

Article 74
A (137: 4: 60) *Editorial Committee*

Recommendation 75A
A (6: 6: 190) *Editorial Committee*
B (1: 5: 194) *Editorial Committee*
C (5: 3: 194) *Editorial Committee*

Article 75bis
A (49: 119: 38) Rejected

Article H1
A (22: 3: 134) *Committee for Hybrids* (*Accepted*, amended)
B (17: 3: 138) *Committee for Hybrids* (*Accepted*)
C (21: 14: 125) *Committee for Hybrids* (*Accepted*, amended)
D (20: 5: 135) *Committee for Hybrids* (*Accepted*, amended)
E (13: 16: 129) *Committee for Hybrids* (Rejected)
F (new) *Committee for Hybrids* (*Accepted*)

Article H2

A (24: 6: 126) *Committee for Hybrids (Accepted)*

Article H3

A (13: 3: 138) *Committee for Hybrids (Accepted)*

Recommendation H5A

A (39: 4: 114) *Committee for Hybrids (Accepted)*

*Appendix II** *To be incorporated in main text Code*

A (20: 9: 87) Rejected
B (11: 6: 95) Rejected
C (3: 19: 92) Rejected

Article PB1 *To be amended and made a note to Article 3*

A (22: 5: 87) Rejected (other amendment accepted)
B (4: 19: 86) Rejected
C (18: 13: 78) Rejected

Article PB2 *To be deleted*

A (5: 28: 76) Rejected
B (20: 5: 87) Rejected

Article PB3 *To be deleted*

A (13: 13: 84) Rejected
B (9: 16: 84) Rejected
C (14: 13: 84) *Accepted*

Article PB4 *To be deleted*

Recommendation PB4A

A (17: 6: 89) Rejected (Note to be added to Article 10)

Article PB5 *To be inserted in Article 60 as a new paragraph*

A (26: 7: 78) *Accepted* (amended)

Article PB6 *To be made a note to Article 41*

Recommendation PB6A *To be made Recommendation 41B*

A (18: 8: 52) Rejected
B (8: 20: 83) Rejected
C (22: 13: 76) *Accepted* (amended)

Recommendation PB6B *To be deleted*

A (16: 8: 85) *Accepted*

Recommendation PB6D *To be made Recommendation 58B* (amended)

A (8: 18: 85) Rejected

Recommendation PB6F *To be deleted*

A (2: 21: 85) Rejected
B (6: 18: 85) *Accepted*

Article PB7

A (8: 29: 79) Rejected
B (6: 27: 80) Withdrawn

Recommendation PB7A

A (9: 23: 78) Rejected

Article PB8

A (14: 24: 79) Withdrawn (New Rec. 57A accepted)

Recommendation PB8A

A (11: 26: 78) Withdrawn

Article PB9

A (21: 8: 86) Rejected

Article PB10

A (9: 30: 77) Withdrawn

Appendix III

A (17: 161: 2) Rejected
B (3: 162: 6) Rejected
C (21: 10: 4) *Accepted*
D (17: 10: 4) *Accepted*
E (124: 35: 12) *Accepted* in principle, referred for final study by Subcommittee for Family Names
F (12: 4: 136) *Committee for Spermatophyta*
G (11: 4: 126) *Editorial Committee*
H (4: 3: 133) *Committee for Fungi*
I (7: 3: 144) *Editorial Committee*
K (3: 3: 145) *Editorial Committee*
L (1: 35: 112) *Subcommittee for Family Names*
M (3: 36: 100) *Subcommittee for Family Names*
N (103: 45: 12) Rejected
O (8: 5: 134) *Nomenclature Committees* (some cases dealt with sub prop. C and D)

Appendix IV

A (171: 4: 14) *Accepted*
B (28: 67: 42) *Editorial Committee*

Arrangement

A (17: 16: 153) Withdrawn
B (39: 3: 141) *Accepted*
C (14: 3: 164) *Editorial Committee*

Addenda

319 (52: 87: 9) *Accepted*
320 (4: 144: 7) Rejected
321 (22: 17: 16) *Committee for Fungi*

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* All proposals referred to Palaeobotanical Committee. The report of this Committee was accepted and its recommendations are listed here.

Motions accepted by the Section of Nomenclature

1. Motion moved by J. Rousseau (unanimously accepted):

   I. The Editorial Committee is empowered:

   1) To change, if necessary, the wording of any article, and to avoid duplication.

   2) To add or remove examples.

   3) To place articles and chapters of the Code in the most convenient places.

   4) To place all or part of the recommendations as notes under the proper articles if necessary.

   5) and, in general, to make any editorial modification not affecting the meanings of the provisions concerned.

   II. All botanists are invited to submit their recommendations concerning editorial aspects, and to send them in writing to the committee before 1 January 1955.

2. Motion moved by A. C. Smith (carried by acclamation):

The Special Committee on Stabilization appointed by the Section on Nomenclature at the International Congress of 1954 having accomplished its mission with signal success, and having provided the Section with guidance in its published report and in verbal communications, the members of the Section express their deep appreciation of the work of the Committee and especially of its Chairman, Mr. J. S. L. Gilmour.

NOMENCLATURE COMMITTEES APPOINTED BY THE CONGRESS

1. *General Committee*
   Chairman: W. Robyns (Belgium)
   Secretary: F. A. Stafleu (Netherlands)
   Members: R. Florin (Sweden)
   C. E. Hubbard (Gr. Britain)
   H. Melchior (Germany)
   G. F. Papenfuss (U.S.A.)
   R. C. Rollins (U.S.A.)

   Ex officio Members: M. A. Donk, S. H. Mamay, J. Lanjouw, R. E. G. Pichi Sermolli, H. W. Rickett, P. C. Silva, W. T. Stearn, R. v. d. Wijk.

2. *Committee for Spermatophyta*
   Chairman: A. R. Pinto da Silva (Portugal)
   Secretary: H. W. Rickett (U.S.A.)
   Members: G. Aymonin (France)
   A. A. Bullock (Great Britain)
   G. Cufodontis (Austria)
   F. R. Fosberg (U.S.A.)
   H. Hara (Japan)
   R. D. Meikle (Great Britain)
   Y. I. Prokhanov (U.S.S.R.)
   W. Rothmaler (Germany)
   A. C. Smith (U.S.A.)
   C. G. G. J. van Steenis (Netherlands)

   Subcommittee for family names
   Chairman: A. Burkart (Argentina)
   Secretary: G. Buchheim (Germany)
   Members: R. C. Bakhuizen v. d. Brink (Netherlands)
   R. S. Cowan (U.S.A.)
   C. E. Wood (U.S.A.)

3. *Committee for Pteridophyta*
   Chairman: R. E. Holttum (Gr. Britain)
   Secretary: R. E. G. Pichi Sermolli (Italy)
   Members: F. Ballard (Great Britain)
   K. U. Kramer (Netherlands)
   C. V. Morton (U.S.A.)
   M. D. Tardieu Blot (France)
   R. M. Tryon (U.S.A.)

4. *Committee for Bryophyta*
   Chairman: M. Fulford (U.S.A.)
   Secretary: R. v. d. Wijk (Netherlands)
   Members: F. Demaret (Belgium)
   P. A. Florschütz (Netherlands)
   S. Hattori (Japan)
   S. Jovet-Ast (France)
   J. Proskauer (U.S.A.)
   H. Reimers (Germany)
   P. W. Richards (Gr. Britain)
   G. Sayre (U.S.A.)
   W. C. Steere (U.S.A.)

5. *Committee for Fungi and Lichens*

Chairman: M. LeGall (France)
Secretary: M. A. Donk (Netherlands)
Members: G. H. Cunningham (New Zealand)
F. C. Deighton (Gr. Britain)
H. Desabbayes (France)
J. W. Groves (Canada)
M. E. Hale (U.S.A.)
S. Imai (Japan)
J. Mattick (Germany)
M. Moser (Austria)
J. A. Nannfeldt (Sweden)
A. Pilat (Czechoslovakia)
R. Santesson (Sweden)
R. Singer (Argentina)
J. A. Stevenson (U.S.A.)
P. H. P. Talbot (S. Africa)
B. P. Vassilkow (U.S.S.R.)

6. *Committee for Algae*

Chairman: J. Feldmann (France)
Secretary: P. C. Silva (U.S.A.)
Members: T. Christensen (Denmark)
M. Desikachary (India)
P. S. Dixon (Great Britain)
M. S. Doty (U.S.A.)
M. Ettl (Czechoslovakia)
J. Gerloff (Germany)
R. Grönblad (Finland)
J. Koster (Netherlands)
H. Luther (Finland)
G. Papenfuss (U.S.A.)
R. Ross (Great Britain)
W. R. Taylor (U.S.A.)
M. Womersley (Australia)

7. *Committee for Bacteria* no nominations

8. *Committee for Virus* no nominations

9. *Committee for Hybrids*

Chairman: J. S. L. Gilmour (Gr. Britain)
Secretary: W. T. Stearn (Great Britain)
Members: P. Aellen (Switzerland)
B. K. Boom (Netherlands)
W. H. Camp (U.S.A.)
J. E. Dandy (Great Britain)
S. Danert (Germany)
N. Hylander (Sweden)
G. H. Lawrence (U.S.A.)
E. L. Little Jr. (U.S.A.)
H. W. Rickett (U.S.A.)
R. C. Rollins (U.S.A.)
P. Wendelbo (Norway)

10. *Committee for Palaeobotanical Nomenclature*

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A. A. Kuprijanova (U.S.S.R.)
S. Leclerq (Belgium)
R. Potonie (Germany)
N. H. Radforth (Canada)
J. M. Schopf (U.S.A.)
O. Selling (Sweden)
K. R. Surange (India)
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11. *Editorial Committee*

Chairman: J. Lanjouw (Netherlands) (Rapporteur-général)
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Special Committee:
Committee on Neotypes

Chairman: F. R. Fosberg (U.S.A.)
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GENERAL COMMITTEE ON BOTANICAL NOMENCLATURE

ACTION ON STABILIZATION

In order to carry into effect the second resolution passed by the plenary session of the IXth International Botanical Congress (see p. 245 of this issue of Taxon) the General Committee on Botanical Nomenclature has sent the following letter to the secretary of the International Commission for the Nomenclature of Cultivated Plants, Dr. H. Fletcher (Edinburgh).

"Dear Fletcher,

At the Nomenclature Section of the IXth International Botanical Congress held in

Montreal last August, the subject of the stabilization of widely used specific names was discussed, and the following resolution was passed by the Section, and later by the plenary session of the Congress:

> Whereas the Nomenclature Section of the IXth International Botanical Congress is aware of the inconvenience to a large number of users of plant names caused by changes in the nomenclature of a number of species which are important economic plants, plants often used as text-book examples, and plants that have been the subject of important scientific work; and whereas this Section is therefore willing to co-operate with all those interested in bringing about stabilization of these plant names; and whereas in order that the Section may ascertain the number and identity of the species involved, all organizations and all persons are invited to send to the General Committee lists of plant names for which stabilization seems important, whether or not these names are now threatened, each name appearing on these lists must be accompanied by a statement of the general importance of the species; and whereas the Committee will set up an organization to study these lists and will report to the next International Botanical Congress, the IXth International Botanical Congress expresses the hope that all those concerned will give scientific and financial support for this important and difficult task.

As you will see, to implement this resolution it is necessary for lists of specific names of certain classes of plants to be prepared and submitted to the General Committee on Botanical Nomenclature, and I am writing to ask whether the International Commission for the Nomenclature of Cultivated Plants would be in a position to coordinate this work in the field of economic plants. Other arrangements will be made regarding the names of non-economic plants, for example those commonly quoted in textbooks.

The lists concerned with economic plants should include the names of species important in agriculture (including food, medicinal, fibre and other plants useful to man), horticulture and forestry, both cultivated species and weeds and *only those names should be listed which have been used for a long period, which are still current over a wide area and the changing of which would cause serious inconvenience to a large number of users.* It is emphasized that these criteria should be rigorously applied and that the lists should be kept as short as possible.

If the Commission is willing to undertake this work, the detailed method of carrying it out would, of course, be left to the Commission, but I would like to suggest that, in addition to the provision of names by members of the Commission for their own knowledge, notices might be published in *Taxon,* and in other suitable periodicals, asking anyone concerned to suggest names to the Commission for their consideration.

As you will see from the terms of the resolution, the General Committee will study the names in those lists and will report on them to the next Congress. It would be convenient, therefore, for names to be sent to the Committee in batches as they are ready (rather than for the Commission to wait until the lists are complete), so that the Committee can begin their study at the earliest possible moment. Each name should be accompanied by a brief statement of the importance of the species concerned, and of the length of time, and area over which, the name put forward has been used. If a species is widely classified under more than one genus for taxonomic reasons, names under each of the genera concerned may be included in the list.

The nature of the study of these names that the General Committee intends to undertake will consist in ascertaining the correct name for each species under the International Code of Botanical Nomenclature as revised at the Montreal Botanical Congress, and will, of course, include the typification of each name. It is anticipated that the Committee's report for the next Congress will take the form of printing, in *Taxon,* a list of the correct names of the species concerned, indicating all cases where the correct name is different from the name included in the lists as originally submitted by the Commission. The next Congress will thus be in a position to consider, with the full facts before them, what action to take in order to implement the intention, expressed in the resolution passed at Montreal, to bring about the stabilization of the names of the species included in the list.

The General Committee very much hopes that the Commission will agree to assist in

this very important piece of work in the way that I have outlined above. If so I suggest that at the next meeting of the Commission, in June 1960, a closing date for sending in names will be agreed upon and published in Taxon.

If there are any points on which you are not clear, please do not hesitate to let me know and I will try to clarify them.

Yours sincerely,
F. A. Stafleu
Secretary General Committee."

NOMINA GENERICA CONSERVANDA ET REJICIENDA SPERMATOPHYTORUM II*

H. W. Rickett (New York) and F. A. Stafleu (Utrecht)

1494. **Listera** R. Brown in W. et W. T. Aiton, Hort. Kew. ed. 2. **5**: 201. Dec(?) 1813.
T.: *L. ovata* (Linnaeus) R. Brown (*Ophrys ovata* Linnaeus).
(H) *Listera* Adanson, Fam. **2**: 321, 572. 1763 prim. [LEGUM.].
(=) *Diphryllum* Rafinesque, Med. Repos. ser. 2. **5**: 357. Jul 1808.
T.: *D. bifolium* Rafinesque.

Note: *Ophrys ovata* Linnaeus was chosen as the type-species of the genus *Ophrys* Linnaeus by Britton and Brown (Ill. Fl. N. United States ed. 2. **1**: 567. 1913). The present conservation implies that the later choice of *O. insectivora* Linnaeus, by M. L. Green (Prop. Brit. Bot. 185. 1929) was sanctioned by the Congress.

†1495. **Neottia** Ludwig, Inst. ed. 2. 135. post Feb 1757.
T.: *N. nidus-avis* (Linnaeus) L. C. Richard (*Ophrys nidus-avis* Linnaeus).

Note: Conservation superfluous: *Neottia* was validly published as early as 1757; it was also taken up by Adanson, Fam. **2**: 70, 582 (1763). This means that the competing *Nidus* Rivinus, Ic. Pl. Irreg. Hexapet. *t.* 7. (1760), cannot replace *Neottia*.

1500. **Anoectochilus** Blume, Bijdr. 411. 1825 sem. 2 ('*Anecochilus*'); corr. Fl. Jav. vi in adnot. 5 Aug. 1828.
T.: *A. setaceus* Blume ('*Anecochilus*').
(V) *Anecochilus* Blume, Bijdr. 411. 1825 sem. 2.
(=) *Chrysobaphus* Wallich, Tent. Fl. Napal. 37. 1826 sem. 2.
T.: *C. roxburghii* Wallich.

1502. **Zeuxine** Lindley, Collect. Bot. Append. n. 18. 1826 ('*Zeuxina*'); corr. Roeper, Linnaea **2**: 532. 1827.
T.: *Z. sulcata* (Roxburgh) Lindley (Gen. Sp. Orch. Pl. 485. Sep 1840) (*Pterygodium sulcatum* Roxburgh, '*sulcata*').
(V) *Zeuxina* Lindley, Collect. Bot. Append. n. 18. 1826 [?1825], Orch. Scel. 9. 1826.

Note: Only if the spelling *Zeuxine* (not *Zeuxina*) is to be conserved is conservation *not* superfluous. There is no competing name, (=) *Adenostylis* Blume, Bijdr. 414 (1825), being a later homonym of *Adenostyles* Cassini, Dict. Sci. Nat. **1** (suppl.): 59 (1816).

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* Continued from Taxon 8: 243. 1959. At the Montreal Botanical Congress the Nomenclature Section voted to treat the names of the "species naturales" in Necker's Elementa Botanica (1790, 3 vols.) as not validly published. In the part already published (Taxon 8: 213-243) a few changes will be needed which will be provided in a list of 'Errata' to follow the final instalment. In the current part and in those that follow the necessary changes have been made without any further reference to Necker.

1516. **Platylepis** A. Richard, Mém. Soc. Hist. Nat. Paris **4**: 34. Nov 1828.
T.: *P. goodyeroides* A. Richard, nom. illeg. [*Goodiera occulta* Thouars, *Platylepis occulta* (Thouars) H. G. Reichenbach].
(=) *Erporkis* Thouars, Nouv. Bull. Soc. Philom. **1**: 317. 1809.

Note: *Erporchis* Thouars (1809) (*'Erporkis'*), orth. mut. Hist. Pl. Orch., *tabl.* (1819-1822), is an illegitimate variant spelling of *Erporkis* Thouars 1809.

1534. **Calopogon** R. Brown in W. et W. T. Aiton, Hort. Kew. ed. 2. **5**: 204. Dec(?) 1813.
T.: *C. pulchellus* R. Brown, nom. illeg. [*Limodorum tuberosum* Linnaeus, *C. tuberosus* (Linnaeus) Britton, Sterns et Poggenburg].

Note 1: *Cathea* Salisbury, Trans Hort. Soc. London **1**: 300 (1812), is a *nomen nudum.*

Note 2: *Calopogon* R. Brown was a superfluous name when published for *Limodorum* Linnaeus 1753, which is now to be rejected in favour of (1483) *Limodorum* L. C. Richard 1817 (*nom. cons.*).

1553. **Microstylis** (Nuttall) A. Eaton, Man. Bot. ed. 3. 115 (*'Microstylus'*), 347, 353. 1822 trim. 1.
T.: *M. ophioglossoides* (Willdenow) A. Eaton, nom. illeg. [*Malaxis ophioglossoides* Willdenow, nom. illeg., *Malaxis unifolia* A. Michaux, *M. unifolia* (A. Michaux) Britton, Stern et Poggendorf].
(≡) *Achroanthes* Rafinesque, Am. Mon. Mag. Crit. Rev. **4**: 195. Jan 1819.

Note: According to V. S. Summerhayes (in litt.), *M. ophioglossoides* has never been separated generically from *M. umbelliflora* and *M. spicata,* the type of *Malaxis* Solander ex Swartz (1788). The correct name for the inclusive genus then remains *Malaxis* Solander ex Swartz; *Microstylis* (Nuttall) A. Eaton can only be used if *Malaxis ophioglossoides* is placed in a separate genus.

†1556. **Liparis** L. C. Richard, Orch. Eur. Annot. 21, 30, 38. 1817; Mém. Mus. Hist. Nat. Paris **4**: 43, 52, 60. 1818.
T.: *L. loeselii* (Linnaeus) L. C. Richard (*Ophrys loeselii* Linnaeus).

Note: *Leptorkis* Thouars, Nouv. Bull. Soc. Philom. **1**: 319 (1809; *Leptorchis* 1822) is an avowed substitute for *Malaxis* Swartz (1788) and should not be listed here. The conservation as it stands at present is superfluous because it was not the intention to reject *Malaxis* Swartz (1788) either here or sub 1553.

1558. **Oberonia** Lindley, Gen. Sp. Orch. Pl. 15. Apr 1830.
T.: *O. iridifolia* Lindley (*typ. cons.*).
(=) *Iridorkis* Thouars, Nouv. Bull. Soc. Philom. **1**: 319. 1809.

Note: *Iridorchis* Thouars (1809) (*'Iridorkis'*), orth. mut. Hist. Pl. Orch. *tabl.* (1822), is an illegitimate variant spelling of *Iridorkis* Thouars (1809).

1559. **Calypso** R. A. Salisbury, Parad. Lond. *t.* 89. 1807.
T.: *C. borealis* R. A. Salisbury, nom. illeg. [*Cypripedium bulbosum* Linnaeus, *C. bulbosa* (Linnaeus) Oakes].
(H) *Calypso* Thouars, Hist. Vég. Isles France, Madag. Réun. 29. *t.* 6. 1804 [HIPPOCRAT.].

† 1565. **Polystachya** W. J. Hooker, Exot. Fl. *t. 103.* Mai 1824.
T.: *P. luteola* Wight (Ic. **5**: *t. 1678.* 1852).

Note 1: Conservation superfluous: *Dendrorkis* Thouars, Nouv. Bull. Soc. Philom. Paris **1**: 318 (1809), is not validly published because Thouars himself says "elles doivent faire partie du genre *Aerides* établi par Loureiro et adopté par Swartz.' Since Thouars himself accepted the name *Aerides* Loureiro (a genus distinct from *Polystachya*) *Dendrorkis* should not be listed here.

Note 2: P. luteola (Swartz) W. J. Hooker is illegitimate because it is based on *Cranichis luteola* Swartz and Swartz mentioned as a synonym *Epidendrum minutum* Aublet. Hooker, therefore, should have taken up the epithet *minutum* (or made a new epithet if he disagreed with Swartz's synonymy). In 1845, however, the combination *Polystachya minuta* was published for another type by Richard and Galeotti and the first author who could legitimately use the epithet *luteola* was Wight as cited above (see Art. 72, note).

1569. **Claderia** J. D. Hooker, Fl. Brit. India **5**: 810. Apr 1890.
T.: *C. viridiflora* J. D. Hooker.

(H) *Claderia* Rafinesque, Sylva Tell. 12. 1838 trim. 4 [RUTAC.].
T.: *C. parviflora* Rafinesque.

†1587. **Stelis** Swartz, Journ. Bot. Schrader **1799** (4): 239. 1799.
T.: *S. ophioglossoides* (N. J. Jacquin) Swartz (*Epidendrum ophioglossoides* N. J. Jacquin) (*typ. cons.*).

Note: Conservation superfluous: *Humboldtia* Ruiz et Pavon, Prodr. 121 (1794), is unavailable because of *Humboldtia* Vahl, Symb. **3**: 106 (1794) (*nom. cons.*, 3518).

1614. **Epidendrum** Linnaeus, Sp. Pl. ed. 2. 1347. Jul 1763.
T.: *E. nocturnum* N. J. Jacquin (Sel. Stirp. Am. Hist. 225. 1763 sem. 1) (*typ. cons.*).

(H) *Epidendrum* Linnaeus, Sp. Pl. 952. 1753 [ORCHID.].
LT.: *E. nodosum* Linnaeus (vide M. L. Green, Prop. Brit. Bot. 186. 1929).

1617. **Laelia** Lindley, Gen. Sp. Orch. Pl. 96, 115. Jul 1831.
T.: *L. grandiflora* (La Llave et Lexarza) Lindley (*Bletia grandiflora* La Llave et Lexarza) (*typ. cons.*).

(H) *Laelia* Adanson, Fam. **2**: 423. 1763 prim. [CRUCIF.].
T.: *Bunias orientalis* Linnaeus.

Note 1: Another homonym: *Laelia* Persoon, Syn. Pl. **2**: 184 (1806) [CRUCIF.].

Note 2: V. S. Summerhayes points out (in litt.) that *L. grandiflora* is thought by some to be a taxonomic synonym of *L. speciosa* (Humboldt, Bonpland et Kunth) Schlechter, which is then the correct name of the species. However, not all students agree on the identity of La Llave's and Lexarza's plant (see L. Williams, Ceiba **1**: 189. 1951).

1631. **Calanthe** R. Brown, Bot. Reg. *t.* 573. 1 Oct 1821.
T.: *C. veratrifolia* (Willdenow) R. Brown, nom. illeg. [*Limodorum veratrifolium* Willdenow; *Orchis triplicata* Willemet, *C. triplicata* (Willemet) Ames ('*triplicatis*')].

(=) *Alismorkis* Thouars, Nouv. Bull. Soc. Philom. Paris **1**: 318. 1809.

Note: Alismorchis Thouars (1809) ('*Alismorkis*'), orth. mut. Hist. Pl. Orch. *table* (1822), is an illegitimate orthographical variant of *Alismorkis* Thouars (1809).

1648. **Eulophia** R. Brown in Ker-Gawler, Bot. Reg. sub *t.* 573. 1 Oct 1821 ('*Eulophus*'); corr. *t.* 686. 1 Feb 1823.
T.: *Serapias capensis* Linnaeus (syn. tax.: *E. ovalis* Lindley).

(V) *Eulophus* R. Brown, Bot. Reg. *t.* 573. 1821.

(=) *Graphorkis* Thouars, Nouv. Bull. Soc. Philom. Paris **1**: 318. 1809.
LT.: *G. scripta* (Thouars) O. Kuntze (*Limodorum scriptum* Thouars '*scripsum*') (vide Summerhayes, Kew Bull. **1953**: 161. 1953).

Note 1: The name *Eulophia barbata* C. Sprengel, Syst. **3**: 720 (1826), is illegitimate because at that time the epithet *capensis* ought to have been adopted by Sprengel (he cites *Serapias capensis* L.). Sprengel's name was based on *Limodorum barbatum* Thunberg. R. Brown in 1821 under *Eulophus* cited '*Limodorum barbatum*', undoubtedly Willdenow's species, which in its turn was based on *Serapias capensis* Linnaeus. The combination *Eulophia capensis* (Linnaeus) Bolus, Journ. Linn. Soc. Bot. **19**: 336 (1882), is based on *Satyrium capense* Linnaeus and therefore unavailable for the present species. The epithet *barbata* may perhaps be used again under Art. 72 (note), but will then have to be attributed to the first author to use *Eulophia barbata* after Bolus (1882); we have not yet traced that author. Meanwhile Lindley (Comp. Bot. Mag. **2**: 202. 1 Feb 1837) had published *E. ovalis*, generally considered now to be a taxonomic synonym of *Limodorum barbatum*.

Note 2: *Graphorchis* Thouars (1822) is an orthographic variant of *Graphorkis* Thouars (1809).

Note 3: *Eulophia* Agardh, Aphor. 109 (1822), was published later than *Eulophia* R. Brown and need not be included here.

1694. **Dendrobium** Swartz, Nova Acta Soc. Sci. Upsal. **6**: 82. 1799.
T.: *D. crumenatum* Swartz (*typ. cons.*).

(=) *Ceraia* Loureiro, Fl. Cochinch. 518. 1790.
T.: *C. simplicissima* Loureiro.

(=) *Callista* Loureiro, Fl. Cochinch. 519. 1790.
T.: *C. amabilis* Loureiro.

† 1697. **Eria** Lindley, Bot. Reg. **11**: *t.* 904. 1 Aug 1825.
T.: *E. stellata* Lindley.

Note: Conservation superfluous: *Pinalia* D. Don, Prodr. Fl. Nepal. 31. 1 Feb (1825), was not validly published by Lindley in 1826 (Orch. Scel. 14, *plate*).

1704. **Cirrhopetalum** Lindley, Gen. Sp. Orch. Pl. 45, 58. Mai 1830.
T.: *C. thouarsii* Lindley, nom. illeg. [*Epidendrum umbellatum* G. Forster, *C. umbellatum* (G. Forster) Frappier ex Cordemoy].

(=) *Ephippium* Blume, Bijdr. 308. 1825 sem. 2.

(=) *Zygoglossum* Reinwardt, Syll. Pl. **2**: 4. 1825-1826 ('1828').
T.: *Z. umbellatum* Reinwardt.

Note: (=) *Hippoglossum* Breda, Gen. Sp. Orch. Ascl. [t. 14] Aug (1829), is not available because of *Hippoglossum* Hill 1756 [LILIAC.].

1705. **Bulbophyllum** Thouars, Hist. Pl. Orch. table. esp. *3 sub u.* 1822.
T.: *B. nutans* Thouars (*typ. cons.*).

(≡) *Phyllorkis* Thouars, Nouv. Bull. Soc. Philom. **1**: 319. 1809.

Note: *Phyllorchis* Thouars (1809) ('*Phyllorkis*'), orth. mut. Hist. Pl. Orch., *tabl. 3 sub u* (1822), is an illegitimate variant.

1714. **Panisea** (Lindley) Lindley, Fol. Orch. **5**: 1854 prim.
T.: *P. parviflora* (Lindley) Lindley (*Coelogyne parviflora* Lindley).

(≡) *Androgyne* Griffith, Not. Pl. Asiat. **3**: 279. 1851.

1739. **Warmingia** H. G. Reichenbach, Otia Bot. Hamb. 87. 1881.
T.: *W. eugenii* H. G. Reichenbach.

(H) *Warmingia* Engler in C. F. P. Martius, Fl. Bras. **12** (2): 281. 1 Sep 1874 [ANACARD.].
T.: *W. pauciflora* Engler.

(H) *Warmingia* Engler in C. F. P. Martius, Fl. Bras. **12** (2): 86, 92. 1 Sep 1874 [RUTAC.].
≡ *Ticorea* Aublet 1775.

1751. **Brachtia** H. G. Reichenbach, Linnaea **22**: 853. 1849 sero.
T.: *B. glumacea* H. G. Reichenbach.

(H) *Brachtia* Trevisan, Alghe Cocc. 57. 1848 [ALGAE].

†1778. **Miltonia** Lindley, Bot. Reg. **23**: sub *t. 1976.* 1 Aug 1837.
T.: *M. spectabilis* Lindley.

Note: Conservation superfluous: *Gynizodon* Rafinesque, Fl. Tell. **4**: 40, was published in 1838 med.

1822. **Saccolabium** Blume, Bijdr. 292. 1825 sem. 2.
T.: *S. pusillum* Blume.

(=) *Gastrochilus* D. Don, Prodr. Fl. Nepal. 32. 1 Feb 1825.
T.: *G. calceolaris* D. Don.

Note: According to V. S. Summerhayes (in litt.), *Gastrochilus* is now generally maintained as a genus distinct from *Saccolabium*. Conservation is effective only if the two genera are united.

1834. **Oeonia** Lindley, Bot. Reg. **10**: sub *t. 817.* 1 Aug 1824 ('*Aeonia*'); corr. Lindley, Collect. Bot. Append. 1825.
T.: *O. auberti* Lindley, nom. illeg. [*Epidendrum volucre* Thouars, *O. volucris* (Thouars) Durand et Schinz].

(V) *Aeonia* Lindley, Bot. Reg. **10**: sub *t. 817.* 1 Aug 1824.

(=) *Epidorkis* Thouars, Nouv. Bull. Soc. Philom. **1**: 318. 1809.

Note: Epidorchis Thouars (1809) ('*Epidorkis*'), orth. mut. Hist. Pl. Orch. *table* (1822), is an illegitimate variant.

post 1834. **Symphyglossum** Schlechter, Orchis **13**: 8. 1919.
T.: *S. sanguineum* (H. G. Reichenbach) Schlechter (*Mesospinidium sanguineum* H. G. Reichenbach).

(H) *Symphyoglossum* Turczaninow, Bull. Soc. Nat. Moscou **21** (1): 255. 1848 [ASCLEP.].
T.: *S. hastatum* (Bunge) Turczaninow (*Asclepias hastata* Bunge).

SAURURACEAE

1857. **Houttuynia** Thunberg, Fl. Jap. 12, 234. 1784.
T.: *H. cordata* Thunberg (l.c. 234, '*Houtuynia*').

(H) *Houttuynia* Houttuyn, Nat. Hist. ser. 2. **12**: 448. 1780 [IRID.].
T.: *H. capensis* Houttuyn.

JUGLANDACEAE

1882. **Carya** Nuttall, Gen. **2**: 220. Mai 1818.
T.: *C. tomentosa* (Poiret) Nuttall (*Juglans tomentosa* Poiret) (*typ. cons.*).

(=) *Hicorius* Rafinesque, Fl. Ludov. 109. 1817.

Note: Scoria Rafinesque, Med. Repos. ser. 2. **5**: 352 (1808), Journ. Bot. Paris **2**: 170 (1809), is not validly published.

FAGACEAE

1891a. **Castanopsis** (D. Don) Spach, Hist. Nat. Vég. Phan. **11**: 142, 185. 1842.
T.: *C. armata* (Roxburgh) Spach (*Quercus armata* Roxburgh).

(=) *Balanoplis* Rafinesque, Alsogr. 29. 1838.
LT.: *B. tribuloides* (J. E. Smith) Rafinesque (*Quercus tribuloides* J. E. Smith) (vide ICBN 233. 1956).

1893. **Cyclobalanopsis** Oersted, Vid. Medd. Nat. For. Kjoebenhavn **1866**: 69. 5 Jul 1867.
T.: *C. velutina* Oersted (*Quercus velutina* Lindley ex Wallich non Lamarck) (*typ. cons.*).

(=) *Perytis* Rafinesque, Alsogr. 29. 1838.
LT.: *P. lamellosa* (J .E. Smith) Rafinesque (*Quercus lamellosa* J. E. Smith).

Note: The name of the type-species is *C. velutina* Oersted based on *Quercus velutina* Lindley ex Wallich non Lamarck. Oersted was free to choose *velutina* as his epithet since there was no other available (Art. 72 note).

ULMACEAE

† 1901. **Zelkova** Spach, Ann. Sci. Nat. Bot. ser. 2. **15**: 356. 1 Jun 1841.
T.: *Z. crenata* (Desfontaines) Spach, nom. illeg.

Note 1: Conservation superfluous: no publication of *Abelicea* before 1841 was valid.

Note 2: We have not been able to find a legitimate name for the type species of *Zelkova* Spach. The name listed for it in the ICBN 1956 [*Z. crenata*] is illegitimate because Spach cited various other epithets one of which ought to have been adopted and furthermore, the basionym (*Ulmus crenata* Desfontaines, Tableau 212. 1804) was also illegitimate because of similar citations.

The earliest epithet mentioned is *polygama* in *Ulmus polygama* said by Spach to have been published by L. C. Richard in 1781 in a dissertation presented at the Paris Academy. We have not (yet) been able, however, to find this name in print and validly published before 1796 (Poiret, Enc. **4**: 611. Feb. 1797). Among the other epithets cited by Desfontaines and Spach the earliest is *carpinifolius* in *Rhamnus carpinifolius*, Pallas, Fl. Ross. **2**: 40. 1788 ('1790').

1904. **Aphananthe** Planchon, Ann. Sci. Nat. Bot. ser. 3. **10**: 265. Nov 1848.
T.: *A. philippinensis* Planchon (l.c. 337).

(H) *Aphananthe* Link, Enum. Hort. Berol. **1**: 383. 1821.
T.: *A. celosioides* (C. Sprengel) Link (*Galenia celosioides* C. Sprengel).

MORACEAE

1917. **Trophis** P. Browne, Hist. Jamaica 357. 1756.
T.: *T. americana* Linnaeus (Syst. Nat. ed. 10. 1289. 1759).

(=) *Bucephalon* Linnaeus, Sp. Pl. 1190. 1753.
T.: *B. racemosum* Linnaeus.

1918. **Maclura** Nuttall, Gen. **2**: 233. Mai 1818.
T.: *M. aurantiaca* Nuttall.

(=) *Ioxylon* Rafinesque, Am. Mon. Mag. Crit. Rev. **2**: 118. Dec 1817.
T.: *I. pomiferum* Rafinesque.

Note: Ioxylon was undoubtedly a misprint (from Rafinesque's handwriting?) for *Toxylon*, to which R. corrected it in Am. Mon. Mag. Crit. Rev. **4**: 188 (Jan 1819). The plant is still known locally as "bow-wood" or "bois d'arc" (pronounced in Missouri "burdock"!). The same name cropped up also as *Joxylon*!

1923. **Broussonetia** L'Héritier ex Ventenat, Tabl. Règne. Vég. **3**: 547. 1799.
T.: *B. papyrifera* (Linnaeus) Ventenat (*Morus papyrifera* Linnaeus).

(H) *Broussonetia* Gomez Ortega, Nov. Rar. Pl. Hort. Matr. Descr. 61. 1798 [LEGUM.].
T.: *B. secundiflora* Gomez Ortega.
(=) *Papyrius* Lamarck, Tabl. Enc. *t.* 762. 1797 vel 1798.

1937. **Clarisia** Ruiz et Pavon, Prodr. 116 (*t.* 28). 1794.
T.: *C. racemosa* Ruiz et Pavon (Syst. 255. 1798) (*typ. cons.*).

(H) *Clarisia* Abat, Mem. Acad. Soc. Med. Sevilla **10**: 418. [CARYOPH.].

Note: The original publication of *Clarisia* Abat (1792) was not consulted by us, but a copy was seen by Lanjouw (Meded. Bot. Mus. Utrecht **31**: 254. 1936).

1942. **Cudrania** Trécul, Ann. Sci. Nat. Bot. ser. 3. **8**: 122. Aug 1847.
T.: *C. javanensis* Trécul (*typ. cons.*).

(=) *Vanieria* Loureiro, Fl. Cochinch. 564. 1790.
LT.: *V. cochinchinensis* Loureiro (vide Merrill, Trans. Am. Philos. Soc. ser. 2. **24**: 134. 1935).

1946. **Artocarpus** J. R. et G. Forster, Char. Gen. Pl. 101. 1776.
T.: *A. communis* J. R. et G. Forster.

(=) *Sitodium* [Solander ex] Parkinson, Journ. Voy. South. Seas 45. 1773.
T.: *S. altile* [Solander ex] Parkinson.

1956. **Antiaris** Leschenault, Ann. Mus. Hist. Nat. Paris **16**: 478. 1810.
T.: *A. toxicaria* Leschenault.

(=) *Ipo* Persoon, Syn. Pl. **2**: 566. 1807.
T.: *I. toxicaria* Persoon.

1957. **Brosimum** Swartz, Prodr. 1, 12. Jun-Jul 1788.
T.: *B. alicastrum* Swartz (*typ. cons.*).

(≡) *Alicastrum* P. Browne, Hist. Jamaica 372. 1756.
(=) *Piratinera* Aublet, Pl. Guiane 888. 1775.
T.: *P. guianensis* Aublet.

1971. **Cecropia** Loefling, Iter. Hisp. 272. 1758 sero.
T.: *C. peltata* Linnaeus (Syst. Nat. ed. 10. 1286. 1759).

(=) *Coilotapalus* P. Browne, Hist. Jamaica 111. 1756.

URTICACEAE

1980. **Laportea** Gaudichaud in Freycinet, Voy. Monde Bot. 498. 6 Mar 1830 ('1826').
T.: *L. canadensis* (Linnaeus) Weddell (Ann. Sci. Nat. Bot. ser. 4. **1**: 181. 1854) (*Urtica canadensis* Linnaeus).

(≡) *Urticastrum* Heister ex Fabricius, Enum. 204. 1759.

† 1984. **Pilea** Lindley, Collect. Bot. ad *t.* 4. 1821 trim. 1.
T.: *P. muscosa* Lindley, nom. illeg. [*Parietaria microphylla* Linnaeus, *P. microphylla* (Linnaeus) Liebmann].

Note: Conservation superfluous: *Adicea* Rafinesque was not validly published before 1822, and *Adike* dates only from 1836.

1987. **Pellionia** Gaudichaud in Freycinet, Voy. Monde Bot. 494. 6 Mar 1830 ('1826').
T.: *P. elatostemoides* Gaudichaud (*typ. cons.*).

(=) *Polychroa* Loureiro, Fl. Cochinch. 538, 559. 1790.
T.: *P. repens* Loureiro.

1988. **Elatostema** J. R. et G. Forster, Char. Gen. Pl. 105. 1776.
T.: *E. sessile* J. R. et G. Forster (*typ. cons.*).

Note: Conservation only because of typification: (=) *Langeveldia* Gaudichaud dates from 1830. The lectotypification of the Code is the one by Weddell, Monogr. Urt. 290, 294, 332 (1856); Arch. Mus. Hist. Nat. Paris **9**: 290, 294, 332 (1856).

PROTEACEAE

2023. **Persoonia** J. E. Smith, Trans. Linn. Soc. **4**: 215. 1798.
T.: *P. lanceolata* Andrews (Bot. Repos. *t. 74.* 1 Nov 1799) (*typ. cons.*).
(=) *Linkia* Cavanilles, Ic. **4**: 61. 14 Mai 1798.
T.: *L. levis* Cavanilles.

2026. **Isopogon** R. Brown in Knight, Cult. Proteeae 93. 1809 sem. 2.
T.: *I. anemonifolius* (R. A. Salisbury) Knight (*Protea anemonifolia* R. A. Salisbury) (*typ. cons.*).
(=) *Atylus* R. A. Salisbury, Parad. Lond. sub *t. 67.* 1 Apr 1807.

Note: Atylus as circumscribed by R. A. Salisbury included *Protea anemonifolia* R. A. Salisbury, the type of *Isopogon* R. Brown. The latter was superfluous when published.

2028. **Sorocephalus** R. Brown, Trans. Linn. Soc. **10**: 139, 142. 1810.
T.: *S. imbricatus* (Thunberg) R. Brown (*Protea imbricata* Thunberg) (*typ. cons.*).
(=) *Soranthe* R. A. Salisbury in Knight, Cult. Proteeae 71. 1809 sem. 2.

Note: Soranthe as circumscribed by R. A. Salisbury included as its first species *Protea imbricata* Thunberg, the type of *Sorocephalus* R. Brown.

2035. **Protea** R. Brown, Trans. Linn. Soc. **10**: 74. 1810.
T.: *P. cynaroides* (Linnaeus) Linnaeus (Mant. 190. 1781) (*Leucadendron cynaroides* Linnaeus, '*cinaroides*') (*typ. cons.*).
(H) *Protea* Linnaeus, Sp. Pl. 94. 1753 [PROTEAC.].
LT.: *P. argentea* Linnaeus (vide Hitchcock, Prop. Brit. Bot. 113. 1929).
≡ *Leucadendron* R. Brown 1810 (*nom. cons.*).
(=) *Leucadendron* Linnaeus, Sp. Pl. 91. 1753.
LT.: *L. lepidocarpodendron* Linnaeus (vide Hitchcock, Prop. Brit. Bot. 122. 1929).
nom. rej. vs. *Leucadendron* R. Brown 1810 (*nom. cons.*).
(=) *Lepidocarpus* Adanson, Fam. **2**: 284, 569. 1763 prim.
(=) *Erodendrum* R. A. Salisbury, Parad. Lond. *t. 67.* 1 Apr 1807.
T.: *E. amplexicaule* R. A. Salisbury.
(=) *Pleuranthe* R. A. Salisbury in Knight, Cult. Proteeae 49. 1809 sem. 2.

Note 1: Protea as conserved should date from the first time that Linnaeus himself placed this species in *Protea* (Mant. **2**: 187. 1771). However, it is difficult to conserve *Protea* Linnaeus as from 1771 because there is no generic diagnosis in 1771. It seems best, therefore, and most convenient because of the common usage of '*Protea* Brown,' to leave the conservation as it stands, although under the type method it should be conserved from 1774 (Murray, Syst. Veg. 113, 117), which is the first usage of *Protea* in a sense including *Leucadendron cynaroides* Linnaeus).

Note 2: The name '*Gagnedi*' is to be removed from the list; it is a vernacular name.

† 2036. **Leucospermum** R. Brown, Trans. Linn. Soc. **10**: 95. 1810.
T.: *L. hypophyllum* R. Brown, nom. illeg. [*Leucadendron hypophyllocarpodendron* Linnaeus, *L. hypophyllocarpodendron* (Linnaeus) Druce] (*typ. cons.*).

Note 1: Conservation superfluous: the type of *Leucadendron* Linnaeus 1753 is *L. lepidocarpodendron* Linnaeus (see no. 2035); the genus is taxonomically synonymous with *Protea* R. Brown and should not be listed here.

Note 2: Leucadendrum R. A. Salisbury (1807) is a later homonym of *Leucadendron* Linnaeus (1753) and not available. (Otherwise Brown's name, for which he cited "*Leucadendrum* Salisb." as a synonym, would be superfluous when published.)

2037. **Leucadendron** R. Brown, Trans. Linn Soc. **10**: 50. 1810 (*nom. cons.*).
T.: *L. argenteum* (Linnaeus) R. Brown (*Protea argentea* Linnaeus) (*typ. cons.*).
(H) *Leucadendron* Linnaeus, Sp. Pl. 91. 1753 (vide 2035).
(≡) *Protea* Linnaeus, Sp. Pl. 94. 1753 (vide 2035).

Note: Leucadendrum R. A. Salisbury (1807) is another later homonym of *Leucadendron* Linnaeus (1753).

2045. **Grevillea** R. Brown in Knight, Cult. Proteeae 120. 1809 sem. 2 ('*Grevillia*'); corr. R. Brown, Trans. Linn. Soc. **10**: 167. 1810.
T.: *G. aspleniifolia* R. Brown ex R. A. Salisbury (*typ. cons.*).
(V) *Grevillia* R. Brown ex R. A. Salisbury in Knight, Cult. Proteeae 120. 1809 sem. 2.
(=) *Lysanthe* R. A. Salisbury in Knight, Cult. Proteeae 116. 1809 sem. 2.
(=) *Stylurus* R. A. Salisbury in Knight, Cult. Proteeae 115. 1809 sem. 2.

2062. **Telopea** R. Brown, Trans. Linn. Soc. **10**: 197. 1810.
T.: *T. speciosissima* (J. E. Smith) R. Brown (*Embrothrium speciosissimum* J. E. Smith) (*typ. cons.*).
(=) *Hylogyne* R. A. Salisbury in Knight, Cult. Proteeae 126. 1809 sem. 2.

2063. **Lomatia** R. Brown, Trans. Linn. Soc. **10**: 199. 1810.
T.: *L. silaifolia* (J. E. Smith) R. Brown (*Embothrium silaifolium* J. E. Smith) (*typ. cons.*).
(=) *Tricondylus* R. A. Salisbury in Knight, Cult. Proteeae 121. 1809 sem. 2.

2064. **Knightia** R. Brown, Trans. Linn. Soc. **10**: 193. 1810.
T.: *K. excelsa* R. Brown.
(=) *Rymandra* R. A. Salisbury in Knight, Cult. Proteeae 124. 1809 sem. 2.
T.: *R. excelsa* Knight.

Note: The use of the same specific epithet for the type-species of *Knightia* and *Rymandra* is by coincidence. *Knightia* R. Brown was named after T. A. Knight, the author of *Rymandra* was J. Knight.

2066. **Stenocarpus** R. Brown, Trans. Linn. Soc. **10**: 201. 1801.
T.: *S. forsteri* R. Brown, nom. illeg. [*S. umbelliferus* (J. R. et G. Forster) Druce, *Embothrium umbelliferum* J. R. et G. Forster] (*typ. cons.*).
(≡) *Cybele* R. A. Salisbury in Knight, Cult. Proteeae 123. 1809 sem. 2.

Note: The combination *S. umbelliferus* (J. R. et G. Forster) Druce was published in June 1917 (Rep. Bot. Exch. Club **1916**: 648) and thus antedates St. John's publication of this combination (Not. Syst. **15**: 230-232. 1956) (see also Taxon **6**: 198. 1957).

2068. **Banksia** Linnaeus f., Suppl. 15, 126. 1781 sem. 2.
T.: *B. serrata* Linnaeus f.

(H) *Banksia* J. R. et G. Forster, Char. Gen. Pl. 7. 1776 [THYMEL.].
nom. rej. vs. *Pimelea* J. Gaertner 1788 (*nom. cons.*) (5467).

2069. **Dryandra** R. Brown, Trans. Linn. Soc. **10**: 211. 1810.
T.: *D. formosa* R. Brown (*typ. cons.*).

(H) *Dryandra* Thunberg, Nova Gen. Pl. 60. 18 Jun 1783 [EUPHORB.].
T.: *D. cordata* Thunberg.
(=) *Josephia* R. Brown in Knight, Cult. Proteeae 110. 1809 sem. 2.

LORANTHACEAE

2074. **Loranthus** Linnaeus, Sp. Pl. ed. 2. 472. Sep 1762.
T.: *L. scurrula* Linnaeus; nom. illeg. [*Scurrula parasitica* Linnaeus; non *Loranthus parasiticus* (Linnaeus) Druce].

(H) *Loranthus* Linnaeus, Sp. Pl. 331. 1753 [LORANTH.].
T.: *L. americanus* Linnaeus.
(≡) *Scurrula* Linnaeus, Sp. Pl. 110. 1753.
T.: *S. parasitica* Linnaeus.

Note: Loranthus scurrula Linnaeus 1762 was illegitimate on publication because at that time Linnaeus ought to have adopted the epithet *parasiticus* for the species. However, before the combination *Loranthus parasiticus* (Linnaeus) Merrill was made in 1919 (based on *Scurrula parasitica* Linnaeus), Druce (Rep. Bot. Exch. Club **1913** (3): 420. 1914) published the combination *L. parasiticus* (Linnaeus) Druce ('*parasitica*') based on *Lonicera parasitica* Linnaeus, which is nowadays also placed in the genus *Elythranthe*. The circumstance that Druce's combination antedates that of Merrill does not make the combination *Loranthus scurrula* Linnaeus legitimate [Art. 64 (1)]. Therefore there is no legitimate epithet under *Loranthus* based on the same type as *Scurrula parasitica* Linnaeus. According to Danser (Bull. Jard. Bot. Buitenzorg ser. 3. **10**: 352. Nov 1929) the first legitimate epithet based on a taxonomic synonym is *budleioides* from *Loranthus budleioides* Lamarck, Enc. **3**: 600 (1791-92). If Danser's view is accepted *Loranthus budleioides* is the correct name for the type-species.

2091. **Arceuthobium** Bieberstein, Fl. Taur. Cauc. Suppl. 629. 1819.
T.: *A. oxycedri* (A. P. Decandolle) Bieberstein (*Viscum oxycedri* A. P. Decandolle).

(=) *Razoumofskya* G. F. Hoffmann, Hort. Mosq. 1. 1808.
T.: *R. caucasica* G. F. Hoffmann.

SANTALACEAE

2097. **Exocarpos** Labillardière, Voy. Pérouse **1**: 155. *t. 14.* 1799 (*nom. cons.*).
T.: *E. cupressiformis* Labillardière.

(=) *Xylophyllos* Rumphius, Auct. 19. *t. 12.* 1755.
T.: *Phyllanthus epiphyllanthus* Linnaeus (Syst. Nat. ed. 10. 1264. 1759).

Note 1: The spelling *Exocarpos* is the one adopted consistently by Labillardière and later authors as well as by the present monographer of the genus (Stauffer, Mitt. Bot. Mus. Zürich **213**: 117. 1959).

Note 2: Xylophylla Linnaeus (1771) is an illegitimate orthographical mutation of *Xylophyllos* Rumphius.

† 2103. **Scleropyrum** Arnott, Mag. Zool. Bot. **2**: 549. 1838.
T.: *S. wallichianum* (Wight et Arnott) Arnott (*Sphaerocarya wallichiana* Wight et Arnott).

Note: Conservation superfluous: the name *Heydia* Dennstedt, Schluess. 30 (1818), is not validly published because it is based on a reference to *Idu-mulli* Rheede, which is a species (cf. case 923).

2109. **Buckleya** Torrey, Am. Journ. Sci. **45**: 170. 1843.
T.: *B. distichophylla* (Nuttall) Torrey (*Borya distichophylla* Nuttall).
(=) *Nestronia* Rafinesque, New Fl. **3**: 12. 1838 trim. 1 ('1836').

2120. **Quinchamalium** Molina, Saggio Chili 151, 350. 1782.
T.: *Q. chilense* Molina.

Note: Now that the type of *Quinchamalium* Molina has been fixed as *Q. chilense* Molina, the conservation becomes superfluous. The *Quinchamalium* A. L. Jussieu (1789) which is conserved is simply a narrower circumscription of the original genus excluding some extraneous elements. The case as it stands at present is superfluous unless of course the choice of the type-species should be altered. No such proposal has been made. If '*Q. chilense* Molina emend. Lamarck' (see Kew Bull. **1935**: 436) has another type specimen than *Q. chilense* Molina, then it should bear another name.

OPILIACEAE

2124. **Cansjera** A. L. Jussieu, Gen. 448. 1789 sem. 2.
T.: *C. rheedii* J. F. Gmelin (Syst. Nat. 280. 1791, '*Cansiera*').
(≡) *Tsjerucaniram* Adanson, Fam. **2**: 80, 614. 1763 prim.

BALANOPHORACEAE

† 2163. **Helosia** L. C. Richard, Mém. Mus. Hist. Nat. Paris **8**: 416. 1822.
T.: *H. guyannensis* L. C. Richard.

Note: Conservation superfluous: the earlier taxonomic synonym *Caldasia* Mutis in Caldas, Seman. Nuevo Reyno Granada **1810** (2): 26 (1810), is not available because of *Caldasia* Willdenow, Hort. Berol. *t. 71* (1806) [POLEM.].

CYTINACEAE

2180. **Cytinus** Linnaeus, Gen. ed. 6. 576 (err. 566) Jun 1764.
T.: *C. hypocistis* (Linnaeus) Linnaeus (*Asarum hypocistis* Linnaeus).
(≡) *Hypocistis* P. Miller, Gard. Dict. Abr. ed. 4. 1754.

POLYGONACEAE

2194. **Emex** Campderá, Monogr. Rumex 56. 1819.
T.: *E. spinosa* (Linnaeus) Campderá (*Rumex spinosus* Linnaeus) (*typ. cons.*).
(≡) *Vibo* Medikus, Philos. Bot. **1**: 178. 1789.

2202. **Fagopyrum** P. Miller, Gard. Dict. Abr. ed. 4. 1754.
T.: *Fagopyrum esculentum* Moench (Meth. 290. 1794) (*Polygonum fagopyrum* Linnaeus) (*typ. cons.*).

Note 1: Conservation superfluous: *Helxine* was the name of a section of *Polygonum* Linnaeus (1753); it was raised to the rank of genus by Rafinesque (1837).

Note 2: We follow McVaugh (Gent. Herb. **8**: 83-90. Mai 1949) in concluding that *F. sagittatum* Gilibert (1792) was not validly published.

2208. **Muehlenbeckia** Meisner, Gen. **1**: 316; **2**: 227. Jul 1841.
T.: *M. australis* (G. Forster) Meisner (*Coccoloba australis* G. Forster).
(=) *Calacinum* Rafinesque, Fl. Tell. **2**: 33. 1837 ('1836').
(=) *Karkinetron* Rafinesque, Fl. Tell. **3**: 11. Nov-Dec 1837 ('1836').

Note: *Calacinum* Rafinesque included *Coccoloba australis* G. Forster.

2209. **Coccoloba** P. Browne, Hist. Jamaica 209. 1756 ('*Coccolobis*'); corr. Linnaeus, Syst. Nat. ed. 10. 997, 1007, 1367. Mai-Jun 1759.
T.: *C. uvifera* (Linnaeus) Linnaeus (*Polygonum uvifera* Linnaeus (*typ. cons.*).
(V) *Coccolobis* P. Browne, Hist. Jamaica 209. 1756.
(≡) *Guaiabara* P. Miller, Gard. Dict. Abr. ed. 4. 1754.

CHENOPODIACEAE

† 2261. **Suaeda** Forskål ex Scopoli, Intr. 333. 1777.
T.: *S. vera* Forskål ex J. F. Gmelin (Syst. **2**: 503. 1791) (*typ. cons.*).

Note 1: Lerchia A. Haller ex Zinn, Catal. 30 (Mai 1757), is no longer available, because of *Lerchea* Linnaeus (1771) (*nom. cons.*) (8130). *Dondia* Adanson, Fam. **2**: 261 (1763), is illegitimate because it is a superfluous name for *Lerchia* A. Haller (it included both original species). *Lerchea* A. Haller ex Rueling, Ord. Pl. 35 (1774), is simply an illegitimate orthographical variant. The conservation of *Suaeda* as it stands now is superfluous unless it can be shown that it is necessary because of the typification.

Note 2: The suggested change in citation of *Suaeda* has already been approved by the Committee for Spermatophyta (Taxon **7**: 189. 1958).

AMARANTHACEAE

2297. **Chamissoa** Humboldt, Bonpland et Kunth, Nova Gen. Sp. **2**: ed. fol. 158, ed. qu. 196. *t. 125*. Feb 1818.
T.: *C. altissima* (N. J. Jacquin) Humboldt, Bonpland et Kunth (*Achyranthes altissima* N. J. Jacquin) (*typ. cons.*).
(=) *Kokera* Adanson, Fam. **2**: 269, 541. 1763 prim.

Note: Humboldt, Bonpland et Kunth's *t. 125* dates from December 1817, but the genus *Chamissoa* was not monotypic on publication and therefore dates from February 1818, the date of publication of the text.

2312. **Cyathula** Blume, Bijdr. 548. 1825 (Dec 1825 or 1826 trim. 1).
T.: *C. prostrata* (Linnaeus) Blume (*Achyranthes prostrata* Linnaeus).
(H) *Cyathula* Loureiro, Fl. Cochinch. 93, 101. 1790 [AMARANTH.].
T.: *C. geniculata* Loureiro.

2314. **Pupalia** A. L. Jussieu, Ann. Mus. Hist. Nat. Paris **2**: 132. 1803.
T.: *P. lappacea* (Linnaeus) A. L. Jussieu (*Achyranthes lappacea* Linnaeus).

(≡) *Pupal* Adanson, Fam. **2**: 268, 596. 1763 prim.

Note 1: It might be argued that this is simply a conservation of a later orthography. In that case it would be *Pupalia* Adanson (1763) (*'Pupal'*), corr. A. L. Jussieu (1803) (*orth. cons.*). However, A. L. Jussieu does not refer to *Pupal* and we therefore prefer to treat *Pupalia* as a new name.

Note 2: Cadelari Medikus, Malven-Fam. 91 (1787), is a later homonym of *Cadelari* Adanson, Fam. **2**: 268 (1763), as well as a superfluous name for *Pupal* Adanson.

Note 3: "*Syama* Jones" is a vernacular name.

2317 **Aerva** Forskål, Fl. Aeg.-Arab. lccxxii, 170. 1775.
T.: *A. tomentosa* Forskål (*typ. cons.*).

(=) *Ouret* Adanson, Fam. **2**: 268, 586. 1763 prim.
T.: *Achyranthes lanata* Linnaeus.

† 2339. **Iresine** P. Browne, Hist. Jamaica 358. 1756.
T.: *I. celosioides* Nuttall (Gen. **2**: 237. Mai 1818) [*Celosia paniculata* Linnaeus, *I. paniculata* (Linnaeus) O. Kuntze non Poiret].

Note 1: Conservation superfluous: P. Browne's name (monotypic) is validly published and legitimate.

Note 2: Linnaeus applied the name *Iresine celosia* to Browne's species in 1759 (Syst. Nat. ed. 10. 1291) and *I. celosioides* in 1763 (Sp. Pl. ed. 2. 1456). Both these names have illegitimate epithets because Linnaeus cited also *Celosia paniculata* Linnaeus (Sp. Pl. 206. 1753) and he ought to have adopted the epithet *paniculata*. The combination *I. paniculata*, however, was applied by Poiret in Lamarck, Enc. Suppl. **3**: 181 (1813) to a different type and *I. paniculata* (Linnaeus) O. Kuntze, Rev. Pl. Gen. 542 (1891), was therefore a later homonym. Before 1813 therefore *paniculata* ought to have been adopted, after 1813, however, the first epithet applied to the P. Browne species was again *celosioides* by Nuttall. The fact that Nuttall chose the illegitimate epithet *celosioides* of Linnaeus is irrelevant because under Article 72 (note) this epithet may be treated as new and attributed to him. We have not been able to find an earlier usage of *celosioides* or *celosia* after 1813.

NYCTAGINACEAE

2348. **Allionia** Linnaeus, Syst. Nat. ed. 10. 883, 890, 1361. Mai-Jun 1759.
T.: *A. incarnata* Linnaeus (*typ. cons.*).

(H) *Allionia* Loefling, Iter Hisp. 181. 1758 sero.
T.: *A. violacea* Linnaeus (Syst. Nat. ed. 10. 890. 1759).

Note: (=) *Wedelia* Loefling, Iter. Hisp. 180 (1758) is no longer available because of *Wedelia* N. J. Jacquin (1760) (*nom. cons.*) (9192).

2350. **Bougainvillea** Commerson ex A. L. de Jussieu, Gen. 91. 1789 sem. 2 (*'Buginvillaea'*); corr. Spach, Hist. Nat. Vég. Phan. **10**: 516. 1841.
T.: *B. spectabilis* Willdenow (Sp. Pl. **2**: 348. 1799) (*typ. cons.*).

(V) *Buginvillaea* Commerson ex A. L. de Jussieu, Gen. 91. 1789 sem. 2.

Note: The date of *Bougainvillea* is that of the original publication of the genus by A. L. de Jussieu; the orthographic change does not change the type (cf. Taxon **3**: 139). There is, then, no need to reject *Josepha* Vellozo (1825) (even if this name were available; it is to be treated as a homonym of *Josephia* R. Brown, 1809).

2407. **Calandrinia** Humboldt, Bonpland et Kunth, Nova Gen. Sp. **6**: ed. fol. 62, ed. qu. 77. Apr 1823.
T.: *C. caulescens* Humboldt, Bonpland et Kunth (*typ. cons.*).
(=) *Baitaria* Ruiz et Pavon, Prodr. 63. 1794. T.: *B. acaulis* Ruiz et Pavon (Syst. 111. 1798).
(=) *Cosmia* Dombey ex A. L. Jussieu, Gen. 312. 1789 sem. 2.

2412. **Anacampseros** Wernischeck, Gen. Pl. 307. 1763.
T.: *A. telephiastrum* A. P. Decandolle (Catal. Monsp. 77. 1813) (*Portulaca anacampseros* Linnaeus).
(H) *Anacampseros* P. Miller, Gard. Dict. Abr. ed. 4 1754 [CRASSUL.].

Note 1: The conservation of *Anacampseros* Sims, Bot. Mag. *t. 1367* (1 Apr 1811) (ICBN 237) was intended to preserve the usage of *Anacampseros* Linnaeus, Gen. ed. 4. (no. 524). This name was first taken up by Wernischeck in 1763, and we propose to conserve *Anacampseros* Wernischeck, Gen. Pl. 307 (1763), T.: *A. telephiastrum* A. P. Decandolle (Cat. Monsp. 77. 1813) (≡ *Portulaca anacampseros* Linnaeus). If this is accepted *Telephiastrum* Medikus (1789) may be removed from the list.

Note 2: Apart from *Anacampseros* P. Miller (1754) (Crassul.), there is *Anacampseros* P. Browne, Hist. Jamaica 234 (1756), presumably not intended as a new name, but used in the Linnean sense of Gen. ed. 4.

Note 3: (≡) *Ruelingia* Ehrhart, Beitr. **3**: 132 (1788), is no longer available, because of *Rulingia* R. Browne (1820) (*nom. cons.*).

CARYOPHYLLACEAE

2432. **Moenchia** Ehrhart, Beitr. **2**: 177. 1788? trim. 2.
T.: *M. quaternella* Ehrhart, nom. illeg. (*Sagina erecta* Linnaeus, *M. erecta* (Linnaeus) Gaertner, Meyer et Scherbius).
(H) *Moenchia* Roth, Tent. Fl. Germ. **1**: 273. 1788 prim.

2450. **Spergularia** (Persoon) J. et K. Presl, Fl. Cech. 94. 1819.
T.: *S. rubra* (Linnaeus) J. et K. Presl (*Arenaria rubra* Linnaeus) (*typ. cons.*).
(=) *Tissa* Adanson, Fam. **2**: 507, 611. 1763.
(=) *Buda* Adanson, Fam. **2**: 507, 528. 1763.

Note: Adanson divided *Spergula* Linnaeus (1753) into *Spergula* (with *S. arvensis* Linnaeus only), *Tissa*, and *Buda*. The citation of *Spergula* under these names in Adanson's index may therefore not be interpreted as making them superfluous renamings of the Linnaean genus.

2455a. **Polycarpaea** Lamarck, Journ. Hist. Nat. Paris **2**: 3 ('*Polycarpea*'), 5. 1792.
T.: *P. teneriffae* Lamarck (*typ. cons.*).
(=) *Polia* Loureiro, Fl. Cochinch. 97, 164. 1790.
T.: *P. arenaria* Loureiro.

2467. **Pollichia** W. Aiton, Hort. Kew. **1**: 5. 1789.
T.: *P. campestris* W. Aiton.
(H) *Polichia* Schrank, Acta Acad. Mogunt. Erfurt **1781**: 35. 1781 [LABIAT.].
T.: *P. galeobdolon* (Linnaeus) Willdenow (Fl. Berol. Prodr. 198. 1787) (*Galeopsis galeobdolon* Linnaeus).

Note: Another homonym is *Pollichia* Medikus (1784) [BORAG.] ≡ *Borraginoides* Boehmer (1760) (*nom. rej.*, 7056).

† 2477. **Siphonychia** Torrey et Gray, Fl. N. Am. **1**: 173. Jul 1838.
T.: *S. americana* (Nuttall) Torrey et Gray (*Herniaria americana* Nuttall).

Note: Conservation superfluous: (=) *Buinalis* Rafinesque, New Fl. **4**: 40, was published late in 1838, at any rate in the last quarter.

NYMPHAEACEAE

2513. **Nymphaea** Linnaeus, Sp. Pl. 510. 1753.
T.: *N. alba* Linnaeus (*typ. cons.*).

Note: Conservation effected in order to fix the type-species. There is no need to cite nomina rejicienda here because they are all later. The conservation is not superfluous because Salisbury (1805) was the first to typify *Nymphaea* (by splitting the genus) and he adopted a different type (*Nymphaea lutea* Linnaeus; cf. Ann. Bot. Konig & Sims **2**: 71. 1805) (see also Kew Bull. **1926**: 99).

2514. **Nuphar** J. E. Smith in Sibthorp et Smith, Fl. Graecae Prodr. **1**: 361. Mai-Nov 1809 ('1806').
T.: *N. lutea* (Linnaeus) J. E. Smith (*Nymphaea lutea* Linnaeus).
(≡) *Nymphozanthus* L. C. Richard, Demonstr. Bot. Anal. Fruits 63, 68 (*Nymphosanthus*), 103. 1808.

Note 1: Nymphaea Linnaeus (1753) is now typified by *N. alba* Linnaeus (see no. 2513) and should not be cited here.

Note 2: J. E. Smith adopted the female gender for the name *Nuphar*. Since *Nuphar* is not a classical word but an Arabic word turned into Greek by Dioskorides, under Rec. 75A (3) we adopt the choice of Smith.

RANUNCULACEAE

2528. **Eranthis** R. A. Salisbury, Trans. Linn. Soc. **8**: 303. 1807.
T.: *E. hyemalis* (Linnaeus) R. A. Salisbury (*Helleborus hyemalis* Linnaeus).
(≡) *Cammarum* J. Hill, Brit. Herbal 47. 1756 sem. 1.

Note: Helleboroides Adanson, Fam. **2**: 458 (1763), is illegitimate because it is based on the same type as *Cammarum* J. Hill (1756).

BERBERIDACEAE

† 2566. **Mahonia** Nuttall, Gen. **1**: 211. Mai 1818.
T.: *M. aquifolium* (Pursh) Nuttall (*Berberis aquifolium* Pursh) (*typ. cons.*).

Note: Conservation superfluous: (=) *Odostemon* Rafinesque was not validly published until 1819.

MENISPERMACEAE

2570. **Cocculus** A. P. Decandolle, Syst. **1**: 515. 1 Nov 1817 ('1818').
T.: *C. hirsutus* (Linnaeus) Diels [Pflanzenreich **4. 94** (Heft 46): 236. 1910] (*Menispermum hirsutum* Linnaeus) (*typ. cons.*).

(=) *Cebatha* Forskål, Fl. Aeg.-Arab. 171. 1775.
T.: *Cocculus cebatha* A. P. Decandolle (Syst. **1**: 527. 1817).

(=) *Leaeba* Forskål, Fl. Aeg.-Arab. 172. 1775.
T.: *L. dubia* J. F. Gmelin (Syst. **2**: 567. 1791).

(=) *Epibaterium* J. R. et Forster, Char. Gen. Pl. 107. 1776.
T.: *E. pendulum* J. R. et G. Forster.

(=) *Nephroia* Loureiro, Fl. Cochinch. 539, 565. 1790.
T.: *N. sarmentosa* Loureiro.

(=) *Baumgartia* Moench, Meth. 650. 1794.
T.: *B. scandens* Moench.

(=) *Androphylax* J. C. Wendland, Bot. Beob. 37, 38. 1798.
T.: *A. scandens* J. C. Wendland.

Note 1: *Wendlandia* Willdenow, Sp. Pl. **2**: 275 (1799), is a superfluous name for *Androphylax* J. C. Wendland (1798).

Note 2: Decandolle's name for the type-species was *C. villosus* (Lamarck) A. P. Decandolle, based on the illegitimate *Menispermum villosum* Lamarck. The latter included *Menispermum hirsutum* Linnaeus.

Note 3: Mr. L. L. Forman from Kew informs us that the first choice of lectotype of *Cocculus* was by Miers, Ann. Mag. Nat. Hist. ser. 2. **7**: 41 (1851), who chose *C. carolinus* (Linnaeus) A. P. Decandolle, based on *Menispermum carolinum* Linnaeus. The choice of *C. villosus* was first proposed by Hitchcock and Green in 1929.

SCHISANDRACEAE

2656. **Schisandra** A. Michaux, Fl. Bor.-Am. **2**: 218. Mar 1803.
T.: *S. coccinea* A. Michaux.

(=) *Stellandria* Brickell, Med. Repos. N.Y. **6**: 327. Feb-Mar 1803.
T.: *S. glabra* Brickell.

CALYCANTHACEAE

2663. **Calycanthus** Linnaeus, Syst. Nat. ed. 10. 1053, 1066, 1371. Mai-Jun 1759.
T.: *C. floridus* Linnaeus.

(=) *Basteria* P. Miller, Fig. Pl. 40. *t. 60.* 30 Dec 1755.

Note: *Calycanthus* Linnaeus was superfluous on publication because Linnaeus cited *Beureria* Ehret, *Butneria* Duhamel, and *Basteria* P. Miller in synonymy.

Beureria Ehret (Pl. Papil. Rar. *t. 13.* 1755) and *Butneria* Duhamel (Traité Arb. Arbut. **1**: 113. 1755) are no longer available because of the conservation of the later homonyms *Bourreria* P. Browne (1756) (7042) and *Byttneria* Loefling (1758) (5062), but *Basteria* P. Miller 1755 was legitimate on publication and based on a different type. The fact that Miller himself later declared his genus to be synonymous with the earlier *Butneria* Duhamel has no effect on its standing. Conservation of *Calycanthus* therefore remains necessary because of *Basteria* P. Miller (1755). *Beureria* and *Butneria* need not be listed here because they are not available.

2663a. **Chimonanthus** Lindley, Bot. Reg. **5**: sub *t. 404.* 1 Oct 1819.
T.: *C. fragrans* Lindley (Bot. Reg. **6**: 451. 1 Mai 1820), nom. illeg. [*Calycanthus praecox* Linnaeus, *C. praecox* (Linnaeus) Link, Enum. Pl. Berol. **2**: 66. 1822].

(≡) *Meratia* Loiseleur, Herb. Gén. Amat. **3**: *t. 173.* Jul 1818 ('1819').

ANNONACEAE

† 2679. **Guatteria** Ru'z et Pavon, Prodr. 85. *t. 17.* 1794.
T.: *G. eriopoda* A. P. Decandolle [Syst. **1**: 505. 1 Nov 1817 ('1818')].

Note: Conservation now superfluous: (=) *Cananga* Aublet, Pl. Guiane 607 (1775), is no longer available because of *Cananga* J. D. Hooker et Thomson (1855) (*nom. cons.*, 2684). *Guatteria* Ruiz et Pavon was legitimate when published.

2680. **Duguetia** A. Saint-Hilaire, Fl. Bras. Mer. **1**: ed. qu. 35, ed. fol. 28. Dec 1824 ('1825').
T.: *D. lanceolata* A. Saint-Hilaire.

(=) *Aberemoa* Aublet, Pl. Guiane 610. 1775.
T.: *A. guianensis* Aublet.

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2684. **Cananga** (A. P. Decandolle) Hooker et Thomson, Fl. Ind. **1**: 129. 1855.
T.: *C. odorata* (Lamarck) Hooker et Thomson (*Uvaria odorata* Lamarck).

(H) *Cananga* Aublet, Pl. Guiane 607. 1775 [ANNONAC.] (vide 2679).
T.: *C. ouregou* Aublet.

2717. **Xylopia** Linnaeus, Syst. Nat. ed. 10. 1241, 1250, 1378. Mai-Jun 1759.
T.: *X. muricata* Linnaeus (*typ. cons.*).

(≡) *Xylopicrum* P. Browne, Hist. Jamaica 250, 254. 1756.

MYRISTICACEAE

† 2750. **Myristica** Gronovius, Fl. Or. 141. 1755.
T.: *M. fragrans* Houttuyn (Nat. Hist. **2** (3): 333. 1774).

Note: The earlier date (1755) makes the conservation superfluous. *Aruana* J. Burmann, Index alter (1769), is not validly published; *Comacum* Adanson (1763) is a later superfluous name for *Myristica* Gronovius.

MONIMIACEAE

2759. **Peumus** Molina, Saggio Chili 185, 350. 1782.
T.: *P. boldus* Molina (*typ. cons.*).

(=) *Boldu* Adanson, Fam. **2**: 446, 526. 1763 prim.

† 2775. **Laurelia** A. L. Jussieu, Ann. Mus. Hist. Nat. Paris **14**: 134. 1809.
T.: *L. aromatica* Poiret (in Lamarck, Enc. Suppl. **3**: 313. Aug 1813), nom. illeg. [*Pavonia sempervirens* Ruiz et Pavon; *L. sempervirens* (Ruiz et Pavon) Tulasne] (*typ. cons.*).

Note: Conservation superfluous: (=) *Pavonia* Ruiz et Pavon, Prodr. 127 (1794), is illegitimate and not available because of *Pavonia* Cavanilles 1786 (*nom. cons.*, 5007).

LAURACEAE

† 2783. **Persea** P. Miller, Gard. Dict. Abr. ed. 4. 1754.
T.: *P. americana* P. Miller (Gard. Dict. ed. 8. 1768) (*Laurus persea* Linnaeus).

Note: Conservation superfluous because of the earlier date. A proposal to "deconserve" the name was published by L. E. Kopp in Taxon **3**: 64, 1954. No formal action has as yet been published on this proposal.

2790. **Nectandra** Rolander ex Rottboel, Acta Lit. Univ. Hafn. **1**: 279. 1778.
T.: *N. sanguinea* Rolander ex Rottboell (*typ. cons.*).
(H) *Nectandra* Bergius, Descr. Pl. Cap. 131. Sep 1767 [THYMEL.].
LT.: *N. sericea* Bergius (vide Mansfeld, Kew Bull. **1935**: 439).

2793. **Eusideroxylon** Teysmann et Binnendijk, Natuurk. Tijdschr. Ned. Indie **25**: 292. 1863.
T.: *E. zwageri* Teysmann et Binnendijk.
(=) *Salgada* Blanco, Fl. Filip. ed. 2. 221. 1845.
T.: *S. lauriflora* Blanco.

2797. **Neolitsea** (Bentham) Merrill, Philipp. Journ. Sci. **1** (suppl.): 56. 1906.
T.: *N. zeylanica* (C. G. Nees) Merrill (*Tetradenia zeylanica* C. G. Nees).
(=) *Bryantea* Rafinesque, Sylva Tell. 165. 1838 trim. 4.
T.: *B. dealbata* (R. Brown) Rafinesque (*Tetranthera dealbata* R. Brown).

2798. **Litsea** Lamarck, Enc. **3**: 574. 1791 ('1789').
T.: *L. chinensis* Lamarck.
(=) *Malapoenna* Adanson, Fam. **2**: 447. 1763 prim.
(=) *Tomex* Thunberg, Nov. Gen. Pl. 65. 18 Jun 1783.
T.: *T. japonica* Thunberg.

Note: Glabraria Linnaeus, Mant. 156, 276 (Oct 1771), must be eliminated as a synonym of *Litsea*. It is a "polypetalous plant, probably belonging in the *Bombacaceae* near the genus *Boschia* Korthals" (Merrill, Interpr. Herb. Amb. 235. 1917; Trans. Am. Philos. Soc. ser. 2. **24**: 401. 1935).

2804. **Bernieria** Baillon, Bull. Soc. Linn. Paris **1**: 434. 1884.
T.: *B. madagascariensis* Baillon.
(H) *Berniera* A. P. Decandolle, Prodr. **7**: 18. 1838 trim. 1 [COMPOS.].
T.: *B. nepalensis* A. P. Decandolle, nom. illeg. (*Chaptalia maxima* D. Don).

2811a. **Endlicheria** C. G. Nees, Linnaea **8**: 37. 1833.
T.: *E. hirsuta* (Schott) C. G. Nees (*Cryptocarpa hirsuta* Schott) (*typ. cons.*).
(H) *Endlichera* K. B. Presl, Symb. Bot. **1**: 73. 1832 [RUBIAC.].
T.: *E. brasiliensis* K. B. Presl.

2821. **Lindera** Thunberg, Nova Gen. Pl. 64. 18 Jun 1783.
T.: *L. umbellata* Thunberg.

(H) *Lindera* Adanson, Fam. **2**: 499. 1763 [UMBELL.].
T.: "*Myrrhis daucoides*. Mor. s.g. t. 10. f. 6." [*Chaerophyllum coloratum* Linnaeus, Mant. **1**: 57. 1767].
(=) *Benzoin* Boerhaave ex Schaeffer, Bot. Exped. 60. 1760.
T.: *B. odoriferum* C. G. Nees (in Wallich, Pl. As. Rar. **2**: 63. Sep 1831) [*Laurus benzoin* Linnaeus, Sp. Pl. 370. 1753; vide Fabricius, Enum. ed. 2. 401. 1763].

PAPAVERACEAE

2856. **Dicentra** Bernhardi, Linnaea **8**: 457, 468. 1833.
T.: *D. cucullaria* (Linnaeus) Bernhardi (*Fumaria cucullaria* Linnaeus).

(≡) *Diclytra* Borkhausen, Arch. Bot. Roemer **1** (2): 46. 1797.
(=) *Capnorchis* P. Miller, Gard. Dict. Abr. ed. 4. 1754.
T.: "*C. americana* Boerh. Ind." [= *Fumaria cucullaria* Linnaeus].
(=) *Bikukulla* Adanson, Fam. **2**: (23). 1763.
T.: "*Bicucullata* March. Mém. Acad. 1733, t. 20" [*Fumaria cucullaria* Linnaeus; vide Linnaeus, Sp. Pl. ed. 2, 983. Jul 1763].
(=) *Dactylicapnos* Wallich, Tent. Fl. Napal. 51. 1826.
T.: *D. thalictrifolia* Wallich.

Note 1: Capnorchis Borckhausen, Arch. Bot. Roemer **1** (2): 46 (1797), is a later homonym of *Capnorchis* P. Miller (1754).

Note 2: Dielytra Chamisso et Schlechtendal, Linnaea **1**: 556 (1826), is a superfluous variant spelling of *Diclytra*.

† 2857. **Adlumia** Rafinesque ex A. P. Decandolle, Syst. **2**: 111. Mai 1821.
T.: *A. cirrhosa* Rafinesque ex A. P. Decandolle, nom. illeg. [*Fumaria fungosa* W. Aiton, *A. fungosa* (W. Aiton) Greene ex Britton, Sterns et Poggenburg].

Note: Conservation superfluous: (≡) *Bicuculla* Borkhausen, Arch. Bot. [Roemer] **1** (2): 46 (1797), is a later homonym of *Bikukulla* Adanson 1763 (see 2856).

2858. **Corydalis** Ventenat, Choix 19. 1803.
T.: *C. sempervirens* (Linnaeus) Persoon (*Fumaria sempervirens* Linnaeus).

(H) *Corydalis* Medikus, Philos. Bot. **1**: 96. 1789 [PAPAV.].
(≡) *Capnoides* P. Miller, Gard. Dict. Abr. ed. 4. 1754.
(=) *Pseudo-fumaria* Medikus, Philos. Bot. **1**: 110. 1789.
T.: *Fumaria lutea* Linnaeus [*Corydalis lutea* (Linnaeus) A. P. Decandolle].

Note 1: (≡) *Neckeria* Scopoli, Intr. 313 (1777), is a superfluous name for (=) *Capnoides* P. Miller (1754). It is also a name rejected in favour of *Neckera* Hedwig (1801) (*nom. cons.*) [MUSCI].

Note 2: For a discussion of this case see Mansfeld, Taxon **2**: 190 (1952).

Note 3: According to *Index kewensis*, *Pistolochia* Bernhardi, Syst. Verz. Erfurt 57 (1800), is a synonym of *Corydalis* Ventenat. We have not been able to consult a copy of this publication.

(*to be continued*)

NEWS AND NOTES

NOTICES OF BOOKS

Contributions to this column will be gratefully received by Dr. K. U. Kramer, Botanical Museum, Lange Nieuwstraat 106, Utrecht, Netherlands.

Families of Flowering Plants

J. Hutchinson: The Families of Flowering Plants. 2nd edition. Clarendon Press, London, 1959. (vol. I, Dicotyledons. xv + 510 pp., 342 figs.; vol. II, Monocotyledons. x + 280 pp., 108 figs. Price £ 7.7.—).

Circumpolar Arctic Flora

N. Polunin: Circumpolar Arctic Flora. Clarendon Press, Oxford, 1959. (xxviii + 514 pp., 1 map, numerous text-figures; with keys to families and genera, in large genera also to species, descriptions, and notes on ecology and distribution. Price £ 6.6.—).

Flora of Woody Plants

J. Fitschen: Gehölzflora. Ein Buch zum Bestimmen der in Deutschland und den angrenzenden Ländern wild wachsenden und angepflanzten Bäume und Sträucher. 5th ed., rev. by F. Boerner. Quelle & Meyer, Heidelberg, 1959. (391 pp., 651 text-figs.; deals with all woody plants native or cultivated in Germany and adjacent regions; with keys and concise descriptions. Price DM 17.50).

Flora of the Southern Alps

H. Pitschmann & H. Reisigl: Bilderflora der Südalpen vom Gardasee zum Comersee. Gustav Fischer, Heidelberg, 1959. (278 pp., 32 coloured plates, 32 plates in black and white and 11 text-figs. Deals with the native and some cultivated plants of the southern Alps from Lake Garda to Lake Como; in some genera only the most interesting species of this region are mentioned. Concise descriptions, with notes on local and general distribution, geology, ecology, etc. Price DM 28.50).

Flora of Belgium

Flore Générale de Belgique. Vol. III fasc. II: *Rubus* (concl.), by J. Legrain, *Geum* and *Potentilla* by A. Lawalrée. Bruxelles, 1959. (pp. 153-306; figs. 9-20).

Fungi of Czechoslovakia

Flora Č S R Series B vol. I: *Gasteromycetes*, ed. by A. Pilát. Publ. by the Czechoslov. Acad. of Sci., Praha, 1958. (862 pp., 256 drawings and photographs; with keys, descriptions, notes on distribution, and bibliography. Czech, with Latin keys and concise descriptions. Price Kr. 87.50).

Keys to Fruits of Polish Plants

W. Kulpa: Owoce i nasiona chwastów. Klucze do oznaczania. Państwowe Wydawbictwo Naukowe, Warsaw, 1958. (417 pp., 233 figs.; with keys and descriptions of fruits of Polish plants; in Polish. Price zl. 38.—).

Diatoms of the Netherlands

A. van der Werff & H. Huls: Diatomeeënflora van Nederland. Vol. 3. Abcoude, July 1959. (With general notes on ecology).

Flora of Tropical East Africa

J. P. M. Brenan: *Leguminosae*, Subfamily *Mimosoideae*. (173 pp., 23 figs.).

J. R. Laundon: *Droseraceae*. (6 pp., 1 fig.). Both London, 1959.

Index of Japanese Type Specimens

H. Itô: Index speciminum typicorum in herbariis japonensibus. Pars *Pteridophyta*. Publ. by the Jap. Soc. for the Promotion of Science, Tokyo, 1959. (58 pp.; with indication of type locality).

Catalogue and Statistics of the Families of Flowering Plants

Catálogo e estatística dos gêneros botânicos fanerogâmicos. 42. *Gramineae*, by A. W. Roach (16 pp.); 43. *Vochysiaceae*, by F. A. Stafleu (1 p.); 44. *Primulaceae*, by P. Wendelbo (1 p.); all Curitiba, Paraná, 1958; 47. *Compositae — Asteroideae — Baccharidinae*, by Bro. T. Luis (1 p.); Curitiba, Paraná, 1959.

Index of Collectors in Brazil

J. Angely: Index dos coletores para a flora do Brasil. 1st pt.: A-H. Instituto Paranaense de Botânica, Curitiba, Paraná, 1959. (15 pp.; a list of names, with indication of herbaria where their collections are found).

Flora of Uruguay

D. Legrand & A. Lombardo: Flora del Uruguay. Vol. I: *Pteridophyta*. Montevideo, 1958. (67 pp., 32 plates; with keys to families, genera, and species).

CANADIAN TREASURY

On 4 September 1959 the following letter was sent to the Canadian members of the I.A.P.T.:

From September 15th, 1959, onwards Dr. J. J. Rousseau will cease to act as Regional Treasurer for Canada for our Association. We are very fortunate to have found Dr. A. Löve ready to take his place and you are kindly requested to send all payments of fees and invoices from now on, to:

Dr. A. Löve,
Canadian Account, I.A.P.T.,
Bank of Montreal,
Girouard and Monkland
Montreal.

Correspondence should be directed to:

Dr. A. Löve,
Institut Botanique de
l'Université de Montreal,
4101 est, rue Sherbrooke,
Montreal 36.

I know that you will all join with me in thanking Dr. Rousseau most sincerely for the great help that he has given to all of us in his capacity as Regional Treasurer in the years 1952-1959 and when I express my gratitude to Dr. Löve for taking over these duties.

F. A. Stafleu,
Treasurer.

Office

The International Bureau for Plant Taxonomy and Nomenclature, 106 Lange Nieuwstraat, Utrecht — Netherlands.

Membership Fees

Members are requested to pay their membership fees to the regional treasurers.

Members in countries without regional treasurers are requested to make payable their subscriptions to *Messrs Vlaer & Kol, Utrecht, Netherlands,* crossed: *"a.c. International Bureau for Plant Taxonomy"*.

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"Taxon" is directed by: Prof. J. Lanjouw, Chief Editor, and Dr. F. A. Stafleu, Assistant Editor. All correspondence should be sent to the International Bureau for Plant Taxonomy and Nomenclature, 106 Lange Nieuwstraat, Utrecht — Netherlands.
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TAXONOMY AND THE INTERNATIONAL ASSOCIATION*

Reed C. Rollins (Cambridge, Mass.)

Our Society is relatively so young that there are no traditions worthy of the name and we scarcely have a history. However, the International Association for Plant Taxonomy has had a vigorous nine years of existence and the considerable accomplishments during that period are truly worthy ones. Many of these accomplishments are well known to you and I shall not recite them here.

The relationship of the Society to the field of Plant Taxonomy as a whole has never been clearly defined, and indeed this may not be wholly desirable, at least in a rigid way, for to do so would take away some of the flexibility needed for quick adaptation to the needs of our membership. The one prime ingredient felt in our organization from the beginning was the need for the stimulus and organizational power that a truly international association could give. The fulfillment of our expectations in this respect has been spectacularly on the positive side and we have reason to be grateful to those who have labored hard to provide the bases for these accomplishments.

Many of the activities of the Society have been in response to practical necessities and these have tended strongly in the direction of nomenclature, codes, indexes and transient news items. It would be easy for us to drift into a position where these matters became the sole concern of the I.A.P.T. and the rigidity of public expectation would tend to keep the Society from breaking out of the mold that we unwittingly made for ourselves. If we are going to become known as a Society whose activities are limited to nomenclature, codes, indexes and ephemeral matters, then we should be conscious of the strictures thus imposed and not at a later time be sorry for our failure to broaden the scope of our activities at the crucial time for it.

My own feeling is, that we, as a Society, should consciously broaden the scope of our relationships to the field of taxonomy and embrace the whole of it as an area of activity. It is true that no two taxonomists will reach perfect agreement as to where the outside lines of the taxonomic field should be drawn, but again I should be enthusiastic for the broadest interpretation possible. In fact, taxonomy or systematics, — I use these two words interchangeably, — should be the broadest of all of the botanical disciplines. The justification of this is completely reasonable and rests on the fact that we are the one discipline that utilizes information from any and all avenues of plant research in our ultimate formulations. Idealistically, data concerning a particular plant group, large or small, should form the basis for (1) the best classification possible, (2) the most perfect understanding of the inter-

*) Presidential address, General Assembly I.A.P.T., Montreal, August 22, 1959.

relationships of the members of the group, including its evolution, and (3) the occurrence of the group on the earth's surface in space and time. These objectives and the adequate storage of information about plants are some of the major concerns of taxonomy.

If we agree to the proposition that the I.A.P.T. should take the lead on a world-wide basis, not only in broadening its own activities but also in broadening taxonomy as well, what directions might this take?

Research in the science of genetics has begun to shift away from traditional or Mendelian genetics in at least three respects. At present, there is a growing concentration upon biochemical genetics, biophysical genetics and microbial genetics. As might be expected, the relationships of the research in these areas to systematics is mostly quite remote. Problems of evolution are a common ground but otherwise there is virtually no connection. This strong drift away from Mendelian genetics is, in fact, leaving a large underworked area that is basic to our field and we should now step into the breach to fulfill at least our own needs in it.

There are several reasons why workers in taxonomy should undertake to cultivate the area of genetics now being somewhat abandoned by the geneticists. We are one of the few remaining branches of botany with a major emphasis on the whole plant for its own sake. Our concern with the product of the genotype interacting with the environment (in other words, our concern with the phenotype), places population genetics squarely in the path of our interest. These days we are, and ought to be, very much population oriented, for the intrabreeding population provides the most important basis for the taxonomists' conclusions. With our natural interest in the dynamics of variation, survival and migration, we not only need the information that can be provided by genetic studies of populations, but we are in a position to exploit this area of research as part of the usual taxonomic research program.

With the constant emphasis upon experimentation, which is everywhere extolled as *the* method of science, anatomy and morphology have become more and more experimental. The more recent students in these fields are less interested in the broad range of anatomical and morphological features found in the plant kingdom as a whole than they are in processes of differentiation, etc., in particular plants. Thus, morphogenesis has become a popular area of study and comparative morphology is becoming less emphasized. In most instances the results from the new trends in these fields will have less bearing on taxonomy than the more generalized type of research that has gone on in the past. It now appears that we as taxonomists will have to sponsor and participate in anatomical and morphological studies relating to our own field. This we should be prepared to do, for it is one of the ways that greater breadth in taxonomy can be achieved. I urge that we lend as much support to comparative anatomy and comparative morphology as we are able to do.

Also, an opportunity exists to further the employment of experimental procedures increasingly in taxonomic work. We have seen an improvement in our understanding of the basic premises of taxonomy in the last decades, through the experimental testing and verification of fundamental tenets. But the surface has only been scratched and there is a never ending series of problems to excite the interested student.

It is not my intention to suggest that we over-emphasize experimental taxonomy or population genetics or comparative morphology. After all, there is a broad front of activity that is peculiar to taxonomy, in addition to nomenclature, and these aspects should not be neglected. We are all aware of the acute lack of knowledge of plants in most areas of the world. The shortage of botanists and the lack of financial support for floristic and monographic work create vital needs of the present. It is, perhaps, presumptuous of me to try to outline to this audience what I think taxonomy and, by coincidence, the activities of our Society, should encompass. However, to

give a rough indication of some of the major lines of what I think our interests should be will serve to emphasize the points I have intended to make. These may be thought of as some of the major objectives of plant taxonomy, for example, to determine and explain the complex interrelationships of plants, genetically, and in time and space; and to produce a classification that reflects these findings as nearly as possible. Comparative and experimental studies are central to the production of the kinds of data required for the synthesis and perfection of a system of classification that, in turn, reflects evolutionary relationships. On the practical side, the assembly of study material is still very incomplete and, since it is one of the aims of taxonomy to make known and preserve representatives of all of the kinds of plants on the earth's surface, there is still much to do. The exploration of many relatively unknown land areas of the globe should be a primary enterprise.

The development of herbaria over the years has been steady and, in general, orderly. But we should understand that complete and ideally prepared herbarium collections of all of the world's plants would still be inadequate for the studies really required. Many aspects of an intensive study require specialized types of material not available in any herbarium collection. Such material will always need to be assembled at the time a particular intensive study is being made.

It is necessary to be precise about what plants grow in a given area because the fundamental relevance of plants to their environment and to the environment of man and other animals is spatial. One aspect of this is floristics, which, in one phase, concerns itself with this question. Too often, the "given area" has been bounded by political considerations rather than biological ones, but all kinds of floras have been produced and many more are needed. If we could move away from the production of politically bounded floristic treatments toward phytogeographically bounded floras, it would be a good thing.

In the realm of spatial relationships, the emphasis of taxonomy on the distributions of plants and the patterns of these on the earth have always been of prime importance. But our efforts in phytogeography have been hampered by lack of taxonomic knowledge and by provincialism. Again political boundaries have gotten in the way. The thing that matters is the total distribution and the world-wide distribution patterns, not those of a given political entity.

The biological basis of classification still requires much elucidation. Plant diversity and the discontinuous nature of this diversity are well known in a general way, but how such diversity is to be interpreted and made a part of biological knowledge as a whole is a significant question. We cannot be satisfied with the emphasis on identities, as determined only by herbarium studies, as much as in the past. We must conduct impartial investigations of the underlying variation patterns found among plants and of the mechanisms controlling these patterns. Such studies can be conducted in many ways and many different facets of the variation can come under attack. Ultimately, as many experimental data as can be brought to bear on particular material should be utilized to the fullest. Perhaps the finest hour of taxonomy and a goal that our Society should proudly work toward will be that occasion when, through the cultivation of research in the broadest ramifications of our subject and the utilization of the diverse information available from other disciplines, then synthesized into a whole, we can say to the world: these are the plants of the earth; this is the overall pattern of their relationships; this is how they became what they are; this is when they came into being; this is where they occur on the earth's surface; and this is why they are there.

STABILIZATION AT MONTREAL

John S. L. Gilmour (Cambridge, U.K.)

The Editors of *Taxon* have asked me to give, very briefly, my impressions of the discussions that took place during the sessions of the Nomenclature Section at Montreal on the stabilization of specific names, in the hope that they may be of some interest to those botanists who were not present at the Congress. I should make it clear that what I am going to say is purely personal, written as a supporter of stabilization by conservation or rejection, and not as Chairman of the Committee for Stabilization.

I should begin, perhaps, with a very brief account of what took place; a full and official report will, of course, appear in due course. When the subject of stabilization came up, the proceedings were opened by the presentation, by myself as Chairman, of the Report of the Committee for Stabilization that had been set up by the Section at Paris in 1954 (see Taxon 8: 19. 1959). I made two main points: first, that, of the twelve members, ten had voted for *either* conservation *or* rejection (later, one member withdrew his support for both), and second, that I was convinced that, if some definite step towards stabilization could be taken by the Section at Montreal, it would be a major contribution towards better relations between taxonomists and other users of plant names. Immediately after the presentation of the Report, Dr. A. C. Smith proposed the following motion:

> The Section on Nomenclature believes that meticulous monographic and revisional studies of groups of plants, utilizing the principle of priority and its modifications as outlined in the 1956 edition of the Code, offer the best means of achieving future stabilization of specific names.

The Chairman, Dr. Rollins, then opened the subject to debate and a full and free discussion took place lasting about an hour and a quarter. Speakers were fairly evenly divided between those supporting Dr. Smith's motion and those who urged that the Section should adopt either conservation or rejection. The following is, I hope, a fair summary of the main arguments put forward by each 'side'. Supporters of Dr. Smith's motion (a) pointed out that no information was available on the number of names that would be involved if conservation or rejection was adopted, and referred to the very long lists of *Nomina Generica Conservanda* that had grown up during the last fifty years; and (b) made a plea that no alteration to the Code should be considered unless the Section had reliable information on this point. Supporters of conservation or rejection felt that this difficulty was being overstressed and that, having regard to the number of name-changes that had already been made, it was unlikely that large numbers of widely used names were still incorrect nomenclaturally; even if the numbers were considerable, however, they felt that it would be worth while undertaking the work involved in their stabilization, in order to avoid the great inconvenience caused to many thousands of name-users by continual changes in the names of widely grown plants.

At the close of the discussion, a card vote was taken and Dr. Smith's motion was carried by 278 votes to 100. Professor Lanjouw then presented the following motion, which was carried, on a show of hands, by a large majority.

> Whereas the Nomenclature Section of the IXth International Botanical Congress is aware of the inconvenience to a large number of users of plant names caused by changes in the nomenclature of a number of species which are important economic plants, plants often used as test-book examples, and plants that have been the subject of important scientific work; and whereas this

Section is therefore willing to co-operate with all those interested in bringing about the stabilization of these plant names; and whereas, in order that the Section may ascertain the number and identity of the species involved, all organizations and all persons are invited to send to the General Committee lists of plant names for which stabilization seems important, whether or not these names are now threatened, each name appearing on these lists being accompanied by a statement of the general importance of the species; and whereas the Committee will set up an organization to study these lists and will report to the next International Botanical Congress, the IXth International Botanical Congress expresses the hope that all those concerned will give scientific and financial support for this important and difficult task.

As a strong supporter of either conservation or rejection, I cannot, of course, help feeling disappointed that the Section did not feel able to adopt one or other of these methods of Stabilization at Montreal. I fully appreciate, however, the force and sincerity of the views of those who demand further information before any alteration is made to the Code, and I welcome Professor Lanjouw's motion as a means of obtaining such information. I hope that the International Commission for the Nomenclature of Cultivated Plants will agree to undertake the compiling of the lists involved and that the various bodies concerned with the use of plant names will co-operate in financing the study of these lists. If the programme outlined in the motion is successfully carried out, the Nomenclature Section at the next Congress will have before it all the information that it could wish and will thus be in a position to decide how it can best implement the decision at Montreal "to co-operate with all those interested in bringing about the stabilization of [specific] names". I feel convinced that the adoption of Professor Lanjouw's motion has removed one of the great barriers to agreement on this difficult and ever-recurring issue and that, at the next Congress, the Section will be able to face it — and solve it — in that spirit of common sense and "sweet reasonableness" that we would all like to see prevail.

NOMINA GENERICA CONSERVANDA ET REJICIENDA SPERMATOPHYTORUM III*

H. W. Rickett (New York) and F. A. Stafleu (Utrecht)

CRUCIFERAE

2884. **Coronopus** Zinn, Cat. Pl. Gotting. 325. 1757.
T.: *C. ruelli* Allioni (*Cochlearia coronopus* Linnaeus).
(H) *Coronopus* P. Miller, Gard. Dict. Abr. ed. 4. 1754. [PLANTAG.?].

Note: For a discussion of the *correct* name for the type-species of *Coronopus* see R. Mansfeld, Rep. Sp. Nov. **46**: 114. 1939.

2902. **Bivonaea** A. P. Decandolle, Mém. Mus. Hist. Nat. Paris **7**: 241. 1821.
T.: *B. lutea* (Bivona-Bernardi) A. P. Decandolle (*Thlaspi luteum* Bivona-Bernardi).
(H) *Bivonea* Rafinesque, Specchio **1**: 156. 1814 [EUPHORB.].
T.: *B. stimulosa* (A. Michaux) Rafinesque (*Jatropha stimulosa* A. Michaux).

Note: Bivonia C. Sprengel, Neue Entd. **2**: 116 (1821) [EUPHORB.], is a later homonym of *Bivonea* Rafinesque (1814) [EUPHORB.]. Both names commemorate A. de Bivona-Bernardi (1774-1837).

2908. **Kernera** Medikus, Pflanzen-Gatt. 77, 95. 1792.
T.: *K. myagrodes* Medikus, nom. illeg. [*Cochlearia saxatilis* Linnaeus, *K. saxatilis* (Linnaeus) H. G. L. Reichenbach].
(H) *Kernera* Schrank, Baier. Reise 50. 1786 [SCROPHUL.].
T.: *K. bavarica* F. P. Schrank.

2940. **Schouwia** A. P. Decandolle, Syst. **2**: 643. Mai (sero) 1821.
T.: *S. arabica* (Vahl) A. P. Decandolle (*Thlaspi arabicum* Vahl), nom. illeg. [*Subularia purpurea* Forskål, *S. purpurea* (Forskål) Schweinfurth].
(H) *Schouwia* H. A. Schrader, Goett. Gelehrte Anz. **1821**: 717. 5 Mai 1821 [MALVAC.].
T.: *S. semiserrata* H. A. Schrader.

Note: (≡) *Subularia* Forskål, Fl. Aeg.-Arab. 117 (1775), is not available because of *Subularia* Linnaeus (1753). It is very doubtful whether Forskål indeed meant to establish a new genus; more probably he meant to add a new species to the Linnaean genus.

2956. **Rapistrum** Crantz, Class. Crucif. Emend. 105. 1769.
T.: *R. hispanicum* (Linnaeus) Crantz (*Myagrum hispanicum* Linnaeus) (*typ. cons.*).
(H) *Rapistrum* A. Haller, Hist. Stirp. Helv. **1**: 224. 1768 [CRUCIF.].
T.: *R. paniculatum* (Linnaeus) J. Gaertner (*Myagrum paniculatum* Linnaeus).
≡ *Neslia* Desvaux 1814 (*nom. cons.*) (2988).

Note: Conservation necessitated by typification.

2965a. **Nasturtium** R. Brown in W. et W. T. Aiton, Hort. Kew. ed. 2. **4**: 109. 1812.
T.: *N. officinale* R. Brown (*Sisymbrium nasturtium-aquaticum* Linnaeus) (*typ. cons.*).
(H) *Nasturtium* P. Miller, Gard. Dict. Abr. ed. 4. 1754.
(≡) *Cardaminum* Moench, Meth. 262. 1794.

Note 1: There are several other (H) *Nasturtium's* that were published between 1754 and 1812. They will all be published in the *Index Nominum Genericorum* and are here omitted because they have no bearing on the case.

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* Continued from Taxon 8: 274. 1959.

Note 2: (≡) *Baeumerta* Gaertner, Meyer et Scherbius, Fl. Wett. **2**: 419, 467 (1800), is a superfluous name for *Cardaminum* Moench 1794.

Note 3: Sisymbrium nasturtium-aquaticum Linnaeus was chosen as the lectotype of the genus *Sisymbrium* by Britton and Brown (Ill. Fl. N.U.S. ed. 2. **2**: 162. 1913). The present conservation, however, implies that the later choice of *Sisymbrium altissimum* is now sanctioned (see Payson, Univ. Wyoming Publ. Bot. **1**: 6. 1922 and M. L. Green, Prop. Brit. Bot. 171. 1929).

2973. **Mancoa** Weddell, Chloris And. **2**: *t. 86d.* 10 Oct 1859 ('1857').
T.: *M. hispida* Weddell.

(H) *Mancoa* Rafinesque, Fl. Tell. **3**: 56. Nov-Dec 1837 ('1836') [PHYTOL.].
T.: *M. secunda* (Ruiz et Pavon) Rafinesque (*Rivina secunda* Ruiz et Pavon).

2986. **Capsella** Medikus, Pflanzen-Gatt. 85, 99. 1792.
T.: *C. bursa-pastoris* (Linnaeus) Medikus (*Thlaspi bursa-pastoris* Linnaeus) (*typ. cons.*).

(≡) *Bursa* Boehmer in Ludwig, Def. Gen. Pl. 225. 1760.

Note: Bursapastoris Quer, Fl. Espan. **3**: 339 (1763), and *Nasturtium* Roth, Tent. Fl. Germ. **1**: 281 (1788), are superfluous names for (≡) *Bursa* Boehmer (1760).

2988. **Neslia** Desvaux, Journ. Bot. Desvaux ser. 2. **3**: 162. 1814.
T.: *N. paniculata* (Linnaeus) Desvaux (*Myagrum paniculatum* Linnaeus).

(≡) *Rapistrum* A. Haller, Hist. Stirp. Helv. **1**: 224. 1768.
nom. rej. vs. *Rapistrum* Crantz 1769 (*nom. cons.*) (2956).

Note 1: At the time of its publication *Neslia* Desvaux was a superfluous name for *Rapistrum* Haller (1768); the circumstance that the latter is no longer available because of the conservation of *Rapistrum* Crantz (1769) therefore does not obviate the need for the conservation of the former.

Note 2: (≡) *Vogelia* Medikus, Pflanzen-Gatt. 32, 95. 1792, is illegitimate because of *Vogelia* J. F. Gmelin, Syst. **2**: 107 (1791).

Note 3: (≡) *Sphaerocarpus* Heister ex Fabricius, Enum. 2. 284 (1763) (non Adanson, Fam. **2**: 15. 1763 prim.), is of questionable validity. Only if the original Heister diagnosis can be found would this name be validly published, but since it is a later homonym it has no bearing on the case anyhow.

2989a. **Erophila** A. P. Decandolle, Syst. **2**: 356. Mai 1821.
T.: *E. vulgaris* A. P. Decandolle, nom. illeg. [*Draba verna* Linnaeus, *E. verna* (Linnaeus) E. Meyer] (*typ. cons.*).

(≡) *Gansblum* Adanson, Fam. **2**: 420. 1763 prim.

Note: Draba verna Linnaeus was chosen as the lectotype of the genus *Draba* Linnaeus by Britton and Brown (Ill. Fl. N.U.S. ed. 2. **2**: 148. 1913). The present conservation of *Erophila* A. P. Decandolle implies that the later choice of *Draba incana* Linnaeus, proposed by M. L. Green (Prop. Brit. Bot. 170. 1929) is now to be maintained.

2997. **Descurainia** Webb et Berthelot, Hist. Nat. Iles Canaries **3** (2[1]): 72. 13 Nov 1836.
T.: *D. sophia* (Linnaeus) Webb ex Prantl (*Sisymbrium sophia* Linnaeus) (*typ. cons.*).

(≡) *Sophia* Adanson, Fam. **2**: 417. 1763 prim.
(=) *Hugueninia* H. G. L. Reichenbach, Fl. Germ. Excurs. 691. 1832.
T.: *H. tanacetifolia* (Linnaeus) H. G. L. Reichenbach (*Sisymbrium tanacetifolium* Linnaeus).

3013. **Lobularia** Desvaux, Journ. Bot. Desvaux ser. 2. **3**: 162. 1814.
T.: *L. maritima* (Linnaeus) Desvaux (*Clypeola maritima* Linnaeus).

(≡) *Adyseton* Adanson, Fam. **2**: (23) [sic!], 420. 1763 prim.

3022. **Lepidostemon** Hooker et Thomson, Journ. Linn. Soc. Bot. **5**: 131. 1861.
T.: *L. pedunculosus* Hooker et Thomson (*typ. cons.*).
(H) *Lepistemon* Blume, Bijdr. 722. 1825 (Dec 1825 or 1826 trim. 1) [CONVOLV.].
T.: *L. flavescens* Blume.

Note: *Lepistemon* is to be treated as a variant spelling of *Lepidostemon*. Blume's name was spelled that way by Hasskarl (Catal. Alter 140. Oct 1844).

3032. **Malcolmia** R. Brown in W. et W. T. Aiton, Hort. Kew. ed. 2. **4**: 121. 1812 ('*Malcomia*'); corr. C. Sprengel, Anleit. ed. 2. **2**: 716. 1818.
T.: *M. maritima* (Linnaeus) R. Brown (*Cheiranthus maritimus* Linnaeus).
(V) *Malcomia* R. Brown in W. et W. T. Aiton, Hort. Kew. ed. 2. **4**: 121. 1812.
(≡) *Wilckia* Scopoli, Intr. 377. 1777.

Note: *Wilckia* Scopoli (1777) is doubtfully legitimate because of *Wilckea* Scopoli, Intr. 170 (1777).

3038. **Euclidium** R. Brown in W. et W. T. Aiton, Hort. Kew. ed. 2. **4**: 74. 1812.
T.: *E. syriacum* (Linnaeus) R. Brown (*Anastatica syriaca* Linnaeus).
(≡) *Hierochontis* Medikus, Pflanzen-Gatt. 51. 1792.
(=) *Soria* Adanson, Fam. **2**: 421. 1763 prim.

3042. **Matthiola** R. Brown in W. et W. T. Aiton, Hort. Kew. ed. 2. **4**: 119. 1812 ('*Mathiola*'); corr. C. Sprengel, Anleit. ed. 2. **2**: 714. 1818.
T.: *M. incana* R. Brown.
(V) *Mathiola* R. Brown in W. et W. T. Aiton, Hort. Kew. ed. 2. **4**: 119. 1812.
(H) *Matthiola* Linnaeus, Sp. Pl. 1192. 1753 [RUBIAC.].
T.: *M. scabra* Linnaeus [syn. tax.: *Guettarda scabra* (Linnaeus) Lamarck].

Note 1: *Matthiola* Linnaeus 1753 was spelled *Mathiola* by Scopoli, Intr. 147 (1777).

Note 2: According to Rothmaler, *Schelhameria* Fabricius, Enum. 161 (1759), should be listed here as a taxonomic synonym (Rep. Sp. Nov. **53**: 22. 1944). The name is not available because of *Schelhammera* R. Brown (1810) (*nom. cons.*) (962).

†3050. **Dontostemon** Andrzeiowski ex Ledebour, Fl. Altaica **3**: 4, 118. 1831.
T.: *D. integrifolius* (Linnaeus) Ledebour (*Sisymbrium integrifolium* Linnaeus).

Note: Conservation superfluous: *Andreoskia* A. P. Decandolle, Prodr. **1**: 190 (Jan 1824), is not available, being a later homonym of *Andrzeiowskia* H. G. L. Reichenbach (1823). (These are considered variant spellings of one name because they were applied to genera of the same family and there is therefore a risk of confusion).

3051. **Chorispora** R. Brown ex A. P. Decandolle, Syst. **2**: 435. Mai 1821.
T.: *C. tenella* (Pallas) A. P. Decandolle (*Raphanus tenellus* Pallas).
(≡) *Chorispermum* R. Brown in W. et W. T. Aiton, Hort. Kew. ed. 2. **4**: 129. 1812.

3081. **Tovaria** Ruiz et Pavon, Prodr. 49. 1794.
T.: *T. pendula* Ruiz et Pavon (Fl. Peruv. Chil. **1**: 73. 1802).
(H) *Tovara* Adanson, Fam. **2**: 276, 612. 1763 [POLYG.].
T.: *Polygonum virginianum* Linnaeus.

Note: (=) *Bancroftia* Macfadyen, Fl. Jamaica **1**: 112 (1837), is illegitimate because of *Bancroftia* Billberg, Linneska Samfund. Handl. **1**: 39 (1833).

CAPPARIDACEAE

3087. **Gynandropsis** A. P. Decandolle, Prodr. **1**: 237. Jan 1824.
T.: *G. pentaphylla* (Linnaeus) A. P. Decandolle, nom. illeg. [*Cleome pentaphylla* Linnaeus (1763) nom. illeg., *Cleome gynandra* Linnaeus (1753) *G. gynandra* (Linnaeus) Briquet].
(≡) *Pedicellaria* Schrank, Mag. Bot. Römer et Usteri **3** (8): 10. 1790.

3103. **Steriphoma** C. Sprengel, Syst. **4** (cur. post.): 130, 139. 1827 sem. 1.
T.: *S. cleomoides* (Willdenow) C. Sprengel, nom. illeg. [*Capparis paradoxa* N. J. Jacquin; *S. paradoxum* (N. J. Jacquin) Endlicher].
(=) *Hermupoa* Loefling, Iter Hisp. 307. 1758 sero.
T.: *H. laeflingiana* [sic!] A. P. Decandolle (Prodr. **1**: 254. 1824).

Note: (≡) *Stephania* Willdenow, Sp. Pl. **2**: 239 (1799), is a later homonym of *Stephania* Loureiro, Fl. Cochinch. 608 (1790).

†3106. **Boscia** Lamarck, Tabl. Enc. *t.* 395. 1793.
T.: *B. senegalensis* Lamarck (Tabl. Enc. **2**: 517. 1819).

Note: Conservation superfluous: Barnhart (mss at NY) and O. Kuntze (Rev. Gen. Pl. **3**(2): 157. 1898) have demonstrated independently that plates 301-400 of the "Illustrations" were published in 1793. (H) *Boscia* Thunberg, Prodr. Pl. Cap. vi, 32. (1794), is therefore a later homonym.

RESEDACEAE

†3122. **Caylusea** A. Saint-Hilaire, 2me Mém. Réséd. 29. 1837 sero.
T.: *C. canescens* (Linnaeus) Walpers (Repert. **2**: 754. 1843) (*Reseda canescens* Linnaeus).

Note: Conservation superfluous: (=) *Hexastylis* Rafinesque (Nov-Dec 1837) is illegitimate because of *Hexastylis* Rafinesque (1825), whereas Rafinesque's substitute name (*Stylexia*) for his own later homonym was published only in 1838 (Fl. Tell. **4**: 121).

3126. **Oligomeris** Cambessèdes in Jacquemont. Voy. Inde Bot. 23. 1838 vel 1839 ('1844').
T.: *O. glaucescens* Cambessèdes.
(=) *Dipetalia* Rafinesque, Fl. Tell. **3**: 73. Nov-Dec 1837 ('1836').
T.: *D. capensis* (Burman) Rafinesque (*Reseda capensis* Burman).
(=) *Ellimia* Nuttall ex Torrey et Gray, Fl. N. Am. **1**: 125. Jul 1838.
T.: *E. ruderalis* Nuttall ex Torrey et Gray.

SARRACENIACEAE

3131. **Darlingtonia** Torrey, Smithson. Contr. Knowl. **6** (4): 4. 1853.
T.: *D. californica* Torrey
(H) *Darlingtonia* A. P. Decandolle, Ann. Sci. Nat. Bot. **4**: 97. Jan 1825 [LEGUM.].
T.: *D. brachyloba* (Willdenow) A. P. Decandolle (*Acacia brachyloba* Willdenow) (vide ICBN ed. 1956. 241).

Note: Another homonym: *Darlingtonia* Torrey, Proc. AAAS **4**: 191 (1851) [BOMBAC./STYRAC.].

CRASSULACEAE

3171. **Rochea** A. P. Decandolle, Pl. Hist. Succ. sub *t.* 103 in adnot. 1802.
T.: *R. coccinea* (Linnaeus) A. P. Decandolle (l.c. in indice) (*Crassula coccinea* Linnaeus) (*typ. cons.*).
(H) *Rochea* Scopoli, Intr. 296. 1777.

SAXIFRAGACEAE (incl. DONATIACEAE et BREXIACEAE)

3182. **Bergenia** Moench, Meth. 664. 1794.
T.: *B. bifolia* Moench, nom. illeg. [*B. crassifolia* (Linnaeus) Fritsch, *Saxifraga crassifolia* Linnaeus].
(H) *Bergena* Adanson, Fam. **2**: 345. 1763 prim.
≡ *Lecythis* Loefling 1758.

3185. **Boykinia** Nuttall, Journ. Acad. Nat. Sci. Phila. **7** (1): 113. 1834.
T.: *B. aconitifolia* Nuttall.

(H) *Boykiana* Rafinesque, Neogenyton 2. 1825 [LYTHR.].
T.: *B. humilis* (A. Michaux) Rafinesque (*Ammannia humilis* A. Michaux).

Note: It is doubtful whether *Boykiana* must be considered a variant of *Boykinia;* however, in 1840 Rafinesque himself spelled his genus '*Boykinia*' (Aut. Bot. 9).

3187. **Suksdorfia** A. Gray, Proc. Am. Acad. **15**: 41. 1880.
T.: *S. violacea* A. Gray.

(=) *Hemieva* Rafinesque, Fl. Tell. **2**: 70. 1837 quadrim. 1 ('1836').

3196. **Tolmiea** Torrey et Gray, Fl. N. Am. **1**: 582. Jun 1840.
T.: *T. menziesii* (W. J. Hooker) Torrey et Gray (*Heuchera menziesii* W. J. Hooker).

(H) *Tolmiea* W. J. Hooker, Fl. Bor.-Am. **2**: 44. 1834 [URTIC.].
T.: *T. occidentalis* W. J. Hooker.
(≡) *Leptaxis* Rafinesque, Fl. Tell. **2**: 75. 1837 quadrim. 1 ('1836').

†3204. **Donatia** J. R. et G. Forster, Char. Gen. Pl. 9. 1776.
T.: *D. fascicularis* J. R. et G. Forster.

Note: Conservation superfluous: *Donatia* Loefling, Iter Hisp. 193 (1758), was only mentioned in synonymy, hence not validly published.

3209. **Jamesia** Torrey et Gray, Fl. N. Am. **1**: 593. Jun 1840.
T.: *J. americana* Torrey et Gray.

(H) *Jamesia* Rafinesque, Atl. Journ. 145. 1832 sero. [LEGUM.].
T.: *J. obovata* Rafinesque, nom. illeg. (*Psoralea jamesii* Torrey).

3225. **Brexia** Noronha ex Thouars, Gen. Nov. Madag. 20. 1808.
T.: *B. madagascariensis* (Lamarck) Noronha (*Venana madagascariensis* Lamarck).

(≡) *Venana* Lamarck, Tabl. Enc. **2**: 99. 1797/8.

CUNONIACEAE

3269. **Platylophus** D. Don, Edinb. New Philos. Journ. **9**: 92. 1830.
T.: *P. trifoliatus* (Linnaeus f.) D. Don (*Weinmannia trifoliata* Linnaeus f.).

(H) *Platylophus* Cassini, Dict. Sci. Nat. **44**: 36. Dec 1826 [COMP.].
T.: *Centaurea nigra* Linnaeus.

3276. **Weinmannia** Linnaeus, Syst. Nat. ed. 10. 1005, 1367. Mai-Jun 1759.
T.: *W. pinnata* Linnaeus.

(≡) *Windmannia* P. Browne, Hist. Jamaica 212. 1756.

BRUNIACEAE

3284. **Thamnea** Solander ex A. T. Brongniart, Ann. Sci. Nat. Bot. **8**: 386. Aug 1826.
T.: *T. uniflora* Solander ex A. T. Brongniart.

(≡) *Thamnia* P. Browne, Hist. Jamaica 245. 1756 [FLACOURT.] (vide no. 5338).
T.: *Laetia thamnia* Linnaeus (Pl. Jam. Pugil. 31. 28 Nov 1759).

3285. **Tittmannia** A. T. Brongniart, Ann. Sci. Nat. **8**: 385. Aug 1826.
T.: *T. laterifolia* A. T. Brongniart.

(H) *Tittmannia* H. G. L. Reichenbach, Ic. Bot. Exot. **1**: 26. *t.* 38. 1827 [SCROPHUL.].
T.: *T. viscosa* (Hornemann) H. G. L. Reichenbach (*Gratiola viscosa* Hornemann).

3286. **Lochostoma** Wikström, Vet.-akad. Handl. Stockholm **1818**: 350. 1818.
T.: *L. obtusiflorum* Wikström, nom. illeg. [*Passerina pentandra* Thunberg, *L. pentandrum* (Thunberg) Druce].
(=) *Ptyxostoma* Vahl, Skr. Naturh. Selsk. Kjøbenh. **6**: 95. 1810.

ROSACEAE

†3316. **Physocarpus** (Cambessèdes) Rafinesque, Sylva Tell. 151. 1838 trim. 4 ('*Physocarpa*'); corr. Maximowicz, Acta Horti Petrop. **6**: 219. 1879.
T.: *P. opulifolius* (Linnaeus) Maximowicz (*Spiraea opulifolia* Linnaeus).
(V) *Physocarpa* Rafinesque, Sylva Tell. 151. 1838.

Note: Conservation superfluous, unless to establish the orthography: *Opulaster* Medikus 1799 is a nomen nudum. Cambessèdes published *Spiraea* sect. *Physocarpos* (Ann. Sci. Nat. **1**: 239, 385. 1824). Rafinesque changed this spelling to *Physocarpa* and Maximowicz changed it again to *Physocarpus*.

3323. **Sorbaria** (Seringe ex A. P. Decandolle) A. Braun in Ascherson, Fl. Prov. Brand. **1**: 177. 1864.
T.: *S. sorbifolia* (Linnaeus) A. Braun (*Spiraea sorbifolia* Linnaeus).
(≡) *Basilima* Rafinesque, New Fl. **3**: 75. 1838 trim. 1 ('1836').

Note: *Schizonotus* Lindley in Wallich, Num. List no. 703 (1829), is not validly published. Previous publications of *Basilima* by Rafinesque (1814, 1815) were also invalid.

3328. **Lindleya** Humboldt, Bonpland et Kunth, Nova Gen. Sp. **6**: ed. fol. 188; ed. qu. 239. Apr 1824.
T.: *L. mespiloides* Humboldt, Bonpland et Kunth.
(H) *Lindleya* C. G. Nees, Flora **4**: 299. 21 Mai 1821 [THEAC.].

3332. **Holodiscus** (C. Koch) Maximowicz, Acta Horti Petrop. **6**: 253. 1879.
T.: *H. discolor* (Pursh) Maximowicz (*Spiraea discolor* Pursh) (*typ. cons.*).
(≡) *Schizonotus* Rafinesque, New Fl. **3**: 4. 1838 trim. 1 ('1836').

3339. **Rhaphiolepis** Lindley, Bot. Reg. **6**: *t. 468.* 1 Jul 1820 ('*Raphiolepis*'); corr. Poiret, Dict. Sci. Nat. **45**: 314. 1827.
T.: *R. indica* (Linnaeus) Lindley (*Crataegus indica* Linnaeus).
(V) *Raphiolepis* Lindley, Bot. Reg. **6**: *t. 468.* 1 Jul 1820.
(=) *Opa* Loureiro, Fl. Cochinch. 308. 1790.
LT.: *O. metrosideros* Loureiro (vide Seemann, Journ. Bot. **1**: 280. 1863; McVaugh, Taxon **5**: 144. 1956).

Note: Merrill, Trans. Am. Philos. Soc. ser. 2. **24**: 286 (1935), typified *Opa* by *O. odorata* Loureiro, of the Myrtaceae.

3377. **Aremonia** A. P. Decandolle, Prodr. **2**: 588. Nov 1825.
T.: *A. agrimonoides* (Linnaeus) A. P. Decandolle (*Agrimonia agrimonoides* Linnaeus).
(≡) *Agrimonoides* [Tournefort] Guettard, Hist. Acad. Roy. Sci. [Paris] Mém. **1749**: 326. 1753.

Note: *Agrimonoides* P. Miller (1754), Gard. Dict. Abr. ed. 4 ≡ *Agrimonoides* Guettard 1753. Other superfluous names for (≡) *Agrimonoides* Guettard 1753 are *Amonia* Nestler (Mon. Potent. 17. 1816) and *Spallanzania* C. Pollini (Pl. Nov. Min. Cogn. 10. 1816 [Also in Gion. Fis. Pavia 1816, not seen] and Viaggio Lago di Garda 96. 1816) all based on *Agrimonia agrimonoides* Linnaeus.

3441. **Pithecellobium** C. F. P. Martius, Flora **20** (2) (Beibl. 8): 114. 21 Oct 1837 (*'Pithecollobium'*).
T.: *P. unguis-cati* (Linnaeus) Bentham (London Journ. Bot. **3**: 200. 1844 *'Pithecolobium'*) (*Mimosa unguis-cati* Linnaeus) (*typ. cons.*).
(=) *Zygia* P. Browne, Hist. Jamaica 279. 1756.
LT.: *Z. latifolia* (Linnaeus) Fawcett et Rendle, Fl. Jamaica **4**: 150. 1920 (q.v.) (*Mimosa latifolia* Linnaeus).

Note: Martius refers to his publication in Hort. Reg. Monac. 188 (1829), where the name was spelled correctly, but where no description was given. The spelling *Pithecollobium* must be treated as an orthographic error.

3444. **Calliandra** Bentham, Journ. Bot. Hooker **2**: 138. Apr 1840.
T.: *C. houstonii* (L'Héritier) Bentham, nom. illeg. (*'houstoni'*) [*Mimosa houstoni* L'Héritier nom. illeg., *Gleditsia inermis* Linnaeus; *C. inermis* (Linnaeus) Druce].
(=) *Anneslia* R. A. Salisbury, Parad. Lond. *t. 64.* 1807.
T.: *A. falcifolia* R. A. Salisbury.
nom. rej. vs. *Anneslea* Wallich 1829 (*nom. cons.*) (5153).

Note: The name *Calliandra* Bentham was superfluous on publication, being proposed as a straightforward substitute name for *Anneslia* R. A. Salisbury (1807). It is not clear why *Mimosa houstoni* L'Héritier was chosen as the conserved type; it should either be *Inga anomala* Kunth, cited by Bentham, or its taxonomic synonym *Anneslia falcifolia* Salisbury.

3448. **Schrankia** Willdenow, Sp. Pl. **4**: 1041. 1806.
T.: *S. aculeata* Willdenow, nom. illeg. [*Mimosa quadrivalvis* Linnaeus, *S. quadrivalvis* (Linnaeus) Merrill].
(H) *Schranckia* J. F. Gmelin, Syst. **2**: 312, 515. 1791 [CELASTR.].
T.: *S. quinquefaria* J. F. Gmelin.

Note 1: (H) *Schrankia* Medikus, Pflanzen-Gatt. 42, 96, dates from 1792 [CRUCIF.] (= *Rapistrum* Crantz 1769, *nom. cons.*, no. 2956).

Note 2: J. F. Gmelin refers to 'Scopoli, introd. g. 1334' which is *Paypayrola* Aublet (*Lignonia* Scopoli, l.c. p. 292), a genus also retained by Gmelin himself.

3450. **Desmanthus** Willdenow, Sp. Pl. **4**: 1044. 1806.
T.: *D. virgatus* (Linnaeus) Willdenow (*Mimosa virgata* Linnaeus).
(≡) *Acuan* Medikus, Theodora 62. 1786.

3452. **Dichrostachys** (A. P. Decandolle) Wight et Arnott, Prodr. 271. Oct (prim.) 1834.
T.: *D. cinerea* (Linnaeus) Wight et Arnott (*Mimosa cinerea* Linnaeus).
(=) *Cailliea* Guillemin, Perrottet et Richard, Fl. Seneg. Tent. 239. Jun-Jul 1832.
T.: *C. dicrostachys* Guillemin et Perrottet, nom. illeg. (*Mimosa nutans* Persoon).

3468. **Entada** Adanson, Fam. **2**: 318, 554. 1763 (prim.).
T.: *E. monostachya* A. P. Decandolle (Prodr. **2**: 425. 2 Nov 1825) (*Mimosa entada* Linnaeus).
(=) *Gigalobium* P. Browne, Hist. Jamaica 362. 1756.

3490. **Copaifera** Linnaeus, Sp. Pl. ed. 2. 557. Sep 1762.
T.: *C. officinalis* (N. J. Jacquin) Linnaeus (*Copaiva officinalis* N. J. Jacquin).
(≡) *Copaiba* P. Miller, Gard. Dict. Abr. ed. 4. 1754.

Note: Copaiva N. J. Jacquin, Enum. Pl. Carib. 4 (Mai 1760), is a superfluous name for *Copaiba* P. Miller (1754).

3495. **Crudia** Schreber, Gen. **1**: 282. 1789 sem. 1.
T.: *C. spicata* (Aublet) Willdenow (Sp. Pl. **2**: 539. 1799) (*Apalatoa spicata* Aublet) (*typ. cons.*).
(≡) *Apalatoa* Aublet, Pl. Guiane 382. 1775.
(=) *Touchiroa* Aublet, Pl. Guiane 384. 1775.
T.: *T. aromatica* Aublet.

Note: (≡) *Waldschmidtia* Scopoli, Intr. 100 (1777), is a superfluous name for *Apalatoa* Aublet 1777; (=) *Cyclas* Schreber (1789) is illegitimate because both *Apalatoa* and *Touchiroa* Aublet are mentioned in synonymy. *Crudia* Schreber has been typified by *Apalatoa spicata* Aublet (*typ. cons.*), the type of *Apalatoa* Aublet, whereas *Apalatoa* is cited as a synonym of *Cyclas* by Schreber himself (Gen. **1**: 282).

3506. **Schotia** N. J. Jacquin, Collectanea **1**: 93. 1787 ('1786').
T.: *S. speciosa* N. J. Jacquin, nom. illeg. [*Guaiacum afrum* Linnaeus, *S. afra* (Linnaeus) Thunberg].
(≡) *Theodora* Medikus, Theodora 16. 1786.

3509. **Afzelia** J. E. Smith, Trans. Linn. Soc. **4**: 221. 1798.
T.: *A. africana* J. E. Smith ex Persoon (Syn. Pl. **1**: 455. 1805).
(H) *Afzelia* J. F. Gmelin, Syst. **2**: 927. 1791 [SCROPHUL.].
T.: *A. cassioides* J. F. Gmelin.
≡ *Seymeria* Pursh 1814 (*nom. cons.*) (7602).

3516. **Berlinia** Solander ex J. D. Hooker in W. J. Hooker, Niger Fl. 326. 1849.
T.: *B. acuminata* Solander ex J. D. Hooker.
(=) *Westia* Vahl, Skr. Natur. Selsk. Kjøbenh. **6**: 117. 1810.

3517. **Macrolobium** Schreber, Gen. **1**: 30. 1789 sem. 1.
T.: *M. vuapa* J. F. Gmelin (Syst. **2**: 93. 1791), nom. illeg. [*Vouapa bifolia* Aublet, *M. bifolium* (Aublet) Persoon] (*typ. cons.*).
(≡) *Vouapa* Aublet, Pl. Guiane 25. 1775.
(=) *Outea* Aublet, Pl. Guiane 28. 1775.
T.: *O. guianensis* Aublet.

Note: (≡) *Kruegeria* Scopoli, Intr. 314. (1777), is a superfluous name for *Vouapa* Aublet (1775).

†3518. **Humboldtia** Vahl, Symb. **3**: 106. 1794.
T.: *H. laurifolia* Vahl.

Note 1: Conservation superfluous. *Batschia* Vahl, Symb. **3**: 39 (1794), is not accepted by the author himself (see Symb. **3**: 106); it is also a later homonym of *Batschia* J. F. Gmelin, Syst. **2**: 315 (1791).

Note 2: According to Swartz, Journ. Bot. Schrader **1799** (4): 240 (1799), Vahl's name has priority over *Humboltia* Ruiz et Pavon, Prodr. 121 (1794).

3524. **Brownea** N. J. Jacquin, Enum. Pl. Carib. 6, 26. Mai 1760 ('*Brownaea*'); corr. Murray, Syst. Veg. 516. 1774.
T.: *B. coccinea* N. J. Jacquin.
(V) *Brownaea* N. J. Jacquin, Enum. Pl. Carib. 6, 26. Mai 1760.
(=) *Hermesias* Loefling, Iter Hisp. 278. 1758 sero.

3532. **Apuleia** C. F. P. Martius, Flora **20** (2) (Beibl. 8): 123. 21 Oct 1837 ('*Apuleja*').
T.: *A. praecox* C. F. P. Martius.
(H) *Apuleia* J. Gaertner, Fruct. **2**: 439. 1791 ('*Apuleja*') [COMP.].
T.: *Atractylis fruticosa* Linnaeus.
≡ *Berkheya* Ehrhart 1788 (*nom. cons.*) (9438).

Note: Proposal B for Art. 73 was accepted by the IXth Int. Bot. Cong. at Montreal; the orthographic change from *Apuleja* to *Apuleia* is, therefore, automatic, and no "correction" need be mentioned.

3553. **Pterolobium** R. Brown ex Wight et Arnott, Prodr. 283. Oct (prim.) 1834.
T.: *P. lacerans* (Roxburgh) R. Brown ex Wight et Arnott, nom. illeg. [*Cantuffa exosa* J. F. Gmelin, *P. exosum* (J. F. Gmelin) E. G. Baker].
(≡) *Cantuffa* J. F. Gmelin, **2**: 677. 1791.
(=) *Reichardia* Roth, Nov. Pl. Sp. 210. 1821 prim.

Note: *Pterolobium* R. Brown in Salt, Voy. Abyss. Append. 64 (1814), is not validly published because it is a publication of a new generic name, in a specific binomial, by reference to a species (cantuffa, nom. vernac.). A proposal to adopt the present reference was accepted by the Committee for Spermatophyta (Taxon **7**: 190. 1958).

3558. **Zuccagnia** Cavanilles, Ic. **5**: 2. Mai 1799.
T.: *Z. punctata* Cavanilles.
(H) *Zuccangnia* Thunberg, Nova Gen. Pl. 227. 17 Dec 1798 [LILIAC.].
T.: *Z. viridis* (Linnaeus) Thunberg (*Hyacinthus viridis* Linnaeus).

Note: *Zuccangnia* Thunberg (1798) was spelled *Zuccagnia* by Thunberg in Arch. Bot. Roemer **2**: 2 (1799).

3561. **Peltophorum** (Vogel) Walpers, Repert. **1**: 811. 1842.
T.: *P. vogelianum* Walpers, nom. illeg. [*Caesalpinia dubia* C. Sprengel, *P. dubium* (C. Sprengel) Taubert].
(=) *Baryxylum* Loureiro, Fl. Cochinch. 266. 1790.
T.: *B. rufum* Loureiro.

Note: Merrill (Trans. Am. Philos. Soc. ser. 2. **24**: 192. 1935) has pointed out that *Baryxylum* is a clear case for the rejection of a name under Article 66 because it is based on a type consisting of two or more entirely discordant elements (*Peltophorum* sp. Walpers, *Gymnocladus* sp., and perhaps *Afzelia* sp.). In that case the conservation would be superfluous.

3574. **Swartzia** Schreber, Gen. **2**: 518. 1791 trim. 1(?).
T.: *S. alata* Willdenow (Sp. Pl. **2**: 1220. 1800).
(H) *Swartsia* J. F. Gmelin, Syst. **2**: 296, 360. 1791 [SOLAN.].
≡ *Solandra* Swartz 1787 (*nom. cons.*) (7414).
(=) *Possira* Aublet, Pl. Guiane 934. 1775.
T.: *P. arborescens* Aublet.
(=) *Tounatea* Aublet, Pl. Guiane 549. 1775.
T.: *T. guianensis* Aublet.

Note 1: We have not been able to trace *Swartzia* Ehrhart (Pl. Exsicc. 1787).

Note 2: (=) *Rittera* Schreber, Gen. **1**: 364 (1789) is a superfluous name for *Possira* Aublet (1775).

Note 3: *Swartzia* Schreber is not a superfluous name for *Tounatea* Aublet because Schreber cites the latter with a question-mark.

3575. **Aldina** Endlicher, Gen. Pl. 1322. Oct 1840.
T.: *A. insignis* (Bentham) Endlicher (*Allania insignis* Bentham).
(H) *Aldina* Adanson, Fam. **2**: 328. 1763 prim. [LEGUM.].
≡ *Brya* P. Browne 1756.

Note 1: (≡) *Allania* Bentham, Journ. Bot. Hooker **2**: 91 (1840), is illegitimate because of *Alania* Endlicher, Gen. Pl. 151 (1836), corr. to *Allania* by Meisner, Gen. Pl. 401 (1842).

Note 2: Another homonym: *Aldinia* Scopoli, Intr. 173 (1777) [ACANTH.].

3582. **Sweetia** C. Sprengel, Syst. **2**: 171, 213. 1825 sero.
T.: *S. fruticosa* C. Sprengel.
(H) *Sweetia* A. P. Decandolle, Prodr. **2**: 381. med. Nov 1825.

Note: Sprengel's *Systema Vegetabilium* vol. 2 appeared late in the year 1825, probably in November or December (see e.g. Flora **8**: 755. 28 Dec 1825) and in the absence of more precise information we must assume that *Sweetia* A. P. Decandolle (med. Nov 1825) has priority.

3584. **Myroxylon** Linnaeus f., Suppl. 34, 233. 1781 sem. 2.
T.: *M. peruiferum* Linnaeus f.

(H) *Myroxylon* J. R. et G. Forster, Char. Gen. Pl. 125. 1776 [FLACOURT.].
(=) *Toluifera* Linnaeus, Sp. Pl. 384. 1753.
T.: *T. balsamum* Linnaeus.

3589. **Camoensia** Welwitsch ex Bentham et Hooker, Gen. Pl. **1**: 557. 19 Oct 1865.
T.: *C. maxima* Welwitsch ex Bentham (Trans. Linn. Soc. **25**: 302. 1866) (*typ. cons.*).

(=) *Giganthemum* Welwitsch, Anais Cons. Ultramar. **1858**: 585. 1859.
T.: *G. scandens* Welwitsch.

3597. **Ormosia** G. Jackson, Trans. Linn. Soc. **10**: 360. 1811.
T.: *O. coccinea* (Aublet) G. Jackson (*Robinia coccinia* Aublet) (*typ. cons.*).

(=) *Toulichiba* Adanson, Fam. **2**: 326. 1763 prim.

3608. **Virgilia** Poiret in Lamarck, Enc. **8**: 677. 1808.
T.: *V. capensis* (Linnaeus) Poiret (*Sophora capensis* Linnaeus) (*typ. cons.*).

(H) *Virgilia* L'Héritier, Diss. Virgilia [Pritzel 5276] 1788 [COMP.].
T.: *V. helioides* L'Héritier.

Note: Lamarck's plate 326 (1793) illustrates *two* species under the name *Virgilia;* the text to accompany this plate (Tabl. Enc. **2**: 470, 471) was published in 1819. The name cannot date from 1793 because the publication was not monotypic.

3619. **Pickeringia** Nuttall ex Torrey et Gray, Fl. N. Am. **1**: 388. Jun 1840.
T.: *P. montana* Nuttall ex Torrey et Gray.

(H) *Pickeringia* Nuttall, Journ. Acad. Nat. Sci. Phila. **7**: 95. 1834 [MYRSIN.].
T.: *P. paniculata* (Nuttall) Nuttall (*Cyrilla paniculata* Nuttall).

3624. **Oxylobium** Andrews, Bot. Repos. **7**: *t. 492.* Nov 1807.
T.: *O. cordifolium* Andrews.

(=) *Callistachys* Ventenat, Jard. Malm. *t. 115.* Dec 1805.
T.: *C. lanceolata* Ventenat.

†3621. **Podalyria** Willdenow, Sp. Pl. **2**: 501. 1799.
T.: *P. retzii* (J. F. Gmelin) Rickett et Stafleu, **comb. nov.** (*Sophora retzii* J. F. Gmelin, Syst. **2**: 665. 1791, *Sophora biflora* Retzius 1779, non Linnaeus 1759) (*typ. cons.*).

Note: Conservation superfluous. The competing name *Aphora* Necker (1790) was not validated until 1891 by O. Kuntze (Rev. Gen. Pl. **1**: 160).

3647. **Walpersia** W. H. Harvey in Harvey et Sonder, Fl. Cap. **2**: 26. Oct 1862.
T.: *W. burtonioides* W. H. Harvey.

(H) *Walpersia* Reissek ex Endlicher, Gen. Pl. 1100. Apr 1840 [RHAMN.].
≡ *Trichocephalus* A. T. Brongniart 1827.

Note: *Walpersia* Meisner ex C. F. F. Krauss, Flora **27**: 357 (7 Jun 1844), was published in synonymy, hence is not valid.

3659. **Rothia** Persoon, Syn. Pl. **2**: 638, et corrig. 1807.
T.: *R. trifoliata* (Roth) Persoon (*Dillwynia trifoliata* Roth) (*typ. cons.*).

(H) *Rothia* Schreber, Gen. **2**: 531. 1791 trim. 1(?) [COMP.].

Note 1: Other homonyms: *Rothia* Borckhausen, Tent. Disp. Pl. Germ. 43 (1792) [GRAM.], and *Rothia* Lamarck, Journ. Hist. Nat. Paris **1**: 16 (1792) [COMPOS.].

Note 2: (≡) *Dillwynia* Roth, Catalecta **3**: 71 (1806), is illegitimate because of *Dillwynia* J. E. Smith, Ann. Bot. Konig et Sims **1**: 510 (1805).

3661. **Wiborgia** Thunberg, Nova Gen. Pl. 137. 3 Jun 1800.
T.: *W. obcordata* Thunberg (*typ. cons.*).
(H) *Viborgia* Moench, Meth. 132. 1794 [LEGUM.].

Note: Another homonym: *Wiborgia* Roth, Catalecta **2**: 112 (1800 prim.) [COMPOS.].

3673. **Argyrolobium** Ecklon et Zeyher, Enum. 184. Jan 1836.
T.: *A. argenteum* (N. J. Jacquin) Ecklon et Zeyher (*Crotalaria argentea* N. J. Jacquin) (*typ. cons.*).
(=) *Lotophyllus* Link, Handb. **2**: 156. 1831.
T.: *L. argenteus* Link.
(=) *Chasmone* E. Meyer, Comm. Pl. Afr. Austr. 71. 14 Feb 1835.

3676. **Petteria** K. B. Presl, Abh. Boehm. Ges. Wiss. ser. 5. **3**: 569. 1845.
T.: *P. ramentacea* (Sieber) K. B. Presl (*Cytisus ramentaceus* Sieber).
(H) *Pettera* H. G. L. Reichenbach, Ic. Fl. Germ. **5**: 33. *t. 220.* 1841 [CARYOPH.].
T.: *P. graminifolia* (Arduino) H. G. L. Reichenbach (*Arenaria graminifolia* Arduino).

3682a. **Sarothamnus** C. F. H. Wimmer, Fl. Schles. 278. 1832.
T.: *S. vulgaris* C. F. H. Wimmer, nom. illeg. [*Spartium scoparium* Linnaeus, *S. scoparius* (Linnaeus) W. D. J. Koch].
(≡) *Cytiso-Genista* Gomez Ortega, Tab. Bot. 39. 1773.

3693. **Hymenocarpos** Savi, Fl. Pisana **2**: 205. 1798.
T.: *H. circinnata* (Linnaeus) Savi (*Medicago circinnata* Linnaeus).
(≡) *Circinnus* Medikus, Vorl. Churpf. Phys.-Ökon. Ges. **2**: 384. 1787.

Note: *Circinnus* Medikus was spelled *Circinus* by Medikus himself in 1789 (Philos. Bot. **1**: 208).

3694. **Securigera** A. P. Decandolle in Lamarck et Decandolle, Fl. Franç. ed. 3. **4**: 609. 1805 (*nom. cons.*).
T.: *S. coronilla* A. P. Decandolle, nom. illeg. [*Coronilla securidaca* Linnaeus, *S. securidaca* (Linnaeus) Dalla Torre et Sarntheim].
(≡) *Bonaveria* Scopoli, Intr. 310. 1777.

Note 1: Other names based on *Coronilla securidaca* Linnaeus are: *Securidaca* P. Miller, Gard. Dict. Abr. ed. 4 (1754), non Linnaeus, Sp. Pl. 707 (1753), and *Securina* Medikus, Vorl. Churpf. Phys.-Ökon. Ges. **2**: 368 (1787). Both these names are illegitimate.

3699. **Tetragonolobus** Scopoli, Fl. Carn. ed. 2. **2**: 87 ('*Tetragonobolus*'), ind. 1772.
T.: *T. scandalida* Scopoli, nom. illeg. [*Lotus siliquosus* Linnaeus, *T. siliquosus* (Linnaeus) Roth].
(=) *Scandalida* Adanson, Fam. **2**: 326. 1763 prim.

3708. **Eysenhardtia** Humboldt, Bonpland et Kunth, Nova Gen. Sp. **6**: ed. fol. 382, ed. qu. 489. Sep 1824.
T.: *E. amorphoides* Humboldt, Bonpland et Kunth.
(=) *Viborquia* Gomez Ortega, Nov. Rar. Pl. Hort. Matr. Descr. 66. 1798.
T.: *V. polystachya* Gomez Ortega.

3709. **Dalea** A. L. Jussieu, Gen. 355. 1789 sem. 2.
T.: *D. alopecuroides* Willdenow (*Psoralea dalea* Linnaeus).
(H) *Dalea* P. Miller, Gard. Dict. Abr. ed. 4. 1754 [SOLAN.].

Note: Other homonyms: *Dalea* P. Browne, Hist. Jamaica 239 [non 314] (1756) [INC. SEDIS], and *Dalea* J. Gaertner, Fruct. **1**: 235 (1788) [SCROPH.].

3710. **Petalostemon** A. Michaux, Fl. Bor.-Am. **2**: 48. 1803 trim. 1 ('*Petalostemum*'), corr. Persoon, Syn. Pl. **2**: 268. 1806.
T.: *P. candidum* (Willdenow) A. Michaux (*Dalea candida* Willdenow).
(V) *Petalostemum* A. Michaux, Fl. Bor.-Am. **2**: 48. 1803 trim. 1.
(=) *Kuhnistera* Lamarck, Enc. **3**: 370. 1791-92 ('1789').
T.: *K. caroliniensis* Lamarck.

3718. **Tephrosia** Persoon, Syn. Pl. **2**: 328. 1807.
T.: *T. villosa* (Linnaeus) Persoon (*Cracca villosa* Linnaeus).
(=) *Needhamia* Scopoli, Intr. 310. 1777.
T.: *Vicia littoralis* N. J. Jacquin (Enum. Pl. Carib. 27. Mai 1760).

Note: (≡) *Cracca* Linnaeus (Sp. Pl. 752. 1753) is not available because of *Cracca* Bentham (1853) (*nom. cons.*) (3745).

3722. **Wisteria** Nuttall, Gen. **2**: 115. Mai (sero) 1818.
T.: *W. speciosa* Nuttall, nom. illeg. [*Glycine frutescens* Linnaeus, *W. frutescens* (Linnaeus) Poiret].
(≡) *Phaseoloides* Duhamel, Traité Arb. Arbust. **2**: 115. 1755.
(=) *Diplonyx* Rafinesque, Fl. Ludov. 101. 1817.
T.: *D. elegans* Rafinesque.

Note: (≡) *Thyrsanthus* S. Elliott, Journ. Acad. Nat. Sci. Phila. **1**: 371 (1818), was published after 23 June.

3745. **Cracca** Bentham in Bentham et Oersted, Vid. Medd. Nat. For. Kjøbenh. **1853**: 8. 1853.
T.: *C. glandulifera* Bentham.
(H) *Cracca* Linnaeus, Sp. Pl. 752. 1753 [LEGUM.] (vide 3718).
LT.: *C. villosa* Linnaeus (vide Britton et Brown, Ill. Fl. N.U.S. Canada ed. 2. **2**: 372. 1913).

Note: (H) *Cracca* Medikus, Vorl. Churpf. Phys.-Ökon. Ges. **2**: 359 (1787), was probably simply a later use of *Cracca* Linnaeus (1753).

3747. **Sesbania** Adanson, Fam. **2**: 327, 604. 1763 prim. ('*Sesban*'), corr. Scopoli, Intr. 308. 1777.
T.: *S. sesban* (Linnaeus) Merrill (*Aeschynomene sesban* Linnaeus).
(V) *Sesban* Adanson, Fam. **2**: 327, 604. 1763 prim.
(=) *Agati* Adanson, Fam. **2**: 326, 513. 1763 prim.
T.: *Robinia caragana* Linnaeus.

†3753. **Clianthus** Solander ex Lindley, Bot. Reg. **21**: *t. 1775*. 1 Jul 1835.
T.: *C. puniceus* (G. Don) Solander ex Lindley (*Donia punicea* G. Don).

Note: Conservation as it stands superfluous: (≡) *Donia* G. Don, Gen. Hist. **2**: 467 (1832), is a later homonym of *Donia* R. Brown ex W. et W. T. Aiton, Hort. Kew. ed. 2. **5**: 82 (1813). There is a proposal, however, to conserve *Clianthus* also over (=) *Sarcodum* Loureiro, Fl. Cochinch. 461 (ed. Willd. 564) (1790) [see Taxon **5**: 81 (1956) sub (13)].

3754. **Sutherlandia** R. Brown ex W. et W. T. Aiton, Hort. Kew. ed. 2. **4**: 327. 1812.
T.: *S. frutescens* (Linnaeus) R. Brown (*Colutea frutescens* Linnaeus).
(H) *Sutherlandia* J. F. Gmelin, Syst. **2**: 1027. 1791 [STERCUL.].
≡ *Heritiera* W. Aiton 1789.

†3767. **Oxytropis** A. P. Decandolle, Astragal. ed. fol. max. 3, 53; ed. fol. min. 24, 66. 1802.
T.: *O. montana* (Linnaeus) A. P. Decandolle (*Astragalus montanus* Linnaeus) (*typ. cons.*).

Note: Conservation superfluous. The competing name *Spiesia* Necker (Elem. **3**: 13. 1790) was not validated until 1891 by O. Kuntze (Rev. Gen. Pl. **1**: 205).

3784. **Nissolia** N. J. Jacquin, Enum. Pl. Carib. 7, 27. Mai 1760.
T.: *N. fruticosa* N. J. Jacquin (*typ. cons.*).
(H) *Nissolia* P. Miller, Gard. Dict. Abr. ed. 4. 1754 [LEGUM.].

3789. **Poiretia** Ventenat, Choix *t. 42.* 1808 ('1803').
T.: *P. scandens* Ventenat.
(H) *Poiretia* J. F. Gmelin, Syst. **2**: 263. 1791 [RUBIAC.].

Note: Another homonym: *Poiretia* Cavanilles, Ic. **4**: 24 (1797) [EPACR.].

3792. **Ormocarpum** Beauvois, Fl. Oware **1**: 95. 1810(?) ('1806').
T.: *O. verrucosum* Beauvois.
(=) *Diphaca* Loureiro, Fl. Cochinch. 453. 1790.
T.: *D. cochinchinensis* Loureiro.

3796. **Smithia** W. Aiton, Hort. Kew. **3**: 496. 1789 trim. 1.
T.: *S. sensitiva* W. Aiton.
(H) *Smithia* Scopoli, Intr. 322. 1777 [CLUSIAC.].
≡ *Quapoya* Aublet 1775.
(=) *Damapana* Adanson, Fam. **2**: 323. 1763.
T.: 'H.M. 9. t. 38' [*Smithia sensitiva* W. Aiton].

3800. **Adesmia** A. P. Decandolle, Ann. Sci. Nat. Bot. **4**: 94. Jan 1825 ('1824').
T.: *A. muricata* (N. J. Jacquin) A. P. Decandolle (*Hedysarum muricatum* N. J. Jacquin) (*typ. cons.*).
(≡) *Patagonium* Schrank, Denkschr. Akad. München **1808**: 93. 1809.

3807. **Desmodium** Desvaux, Journ. Bot. Desvaux ser. 2. **1**: 122. 1813.
T.: *D. scorpiurus* (Swartz) Desvaux (*Hedysarum scorpiurus* Swartz) (*typ. cons.*).
(=) *Meibomia* Heister ex Fabricius, Enum. 168. 1759.
LT.: *Hedysarum canadense* Linnaeus (vide Adanson, Fam. **2**: 509, 575. 1763).
(=) *Pleurolobus* Jaume Saint-Hilaire, Nouv. Bull. Soc. Philom. Paris **3**: 192. 1812.

†3810. **Alysicarpus** Desvaux, Journ. Bot. Desvaux ser. 2. **1**: 120. 1813.
T.: *A. bupleurifolius* (Linnaeus) A. P. Decandolle (*Hedysarum bupleurifolium* Linnaeus) (*typ. cons.*).

Note: Conservation superfluous: (=) *Fabricia* Scopoli, Intr. 307 (1777), is illegitimate because of *Fabricia* Adanson, Fam. **2**: 188 (1763) [LABIAT.]; (≡) *Hallia* Jaume Saint-Hilaire, Bull. Soc. Philom. **3**: 192 (Dec 1812) is illegitimate because of *Hallia* Thunberg, Journ. Bot. Schrader **1799**(1): 318. 1799.

3821. **Dalbergia** Linnaeus f., Suppl. 52, 316. 1781 sem. 2.
T.: *D. lanceolaria* Linnaeus f.
(=) *Ecastaphyllum* P. Browne, Hist. Jamaica 299. 1756.
T.: *Hedysarum ecastaphyllum* Linnaeus (Syst. Nat. ed. 10. 1169. 1759).
(=) *Amerimnon* P. Browne, Hist. Jamaica 288. 1756.
T.: *A. brownei* N. J. Jacquin (Enum. Pl. Carib. 27. Mai 1760).
(=) *Acouroa* Aublet, Pl. Guiane 753. 1775.
T.: *A. violacea* Aublet.

Note: *Securidaca* Linnaeus, Sp. Pl. 707 (1753) (non Linnaeus 1759, *nom. cons.*, 4275), is probably a taxonomic synonym of *Dalbergia* Linnaeus f. Since, however, it is no longer available it need not be listed here.

3834. **Lonchocarpus** Humboldt, Bonpland et Kunth, Nova Gen. Sp. **6**: ed. fol. 300; ed. qu. 383. Apr 1824.
T.: *L. sericeus* (Poiret) A. P. Decandolle (*Robinia sericea* Poiret) (*typ. cons.*).
(=) *Clompanus* Aublet, Pl. Guiane 773. 1775.
T.: *C. paniculata* Aublet.

Note 1: *Robinia* Aublet, Pl. Guiane 768 ('*Robina*', *Robinia* in ind.) (1775), is a later use of *Robinia* Linnaeus (1753) and should not be listed here.

Note 2: (by R. S. Cowan). The lectotype for a genus originally described with several species, as was this genus, must come from among those species. The one cited above is not one of these and it should be replaced in the Code by *L. punctatus* Humboldt, Bonpland et Kunth which was chosen much earlier by Pittier (Contr. U.S. Nat. Herb. **20**: 89. Aug 1917); the latter also fulfills the qualification of being one of the original species.

3836. **Pongamia** Ventenat, Jard. Malm. *t. 28.* Dec 1803.
T.: *P. glabra* Ventenat, nom. illeg. [*Robinia mitis* Linnaeus, nom. illeg., *Cytisus pinnatus* Linnaeus, *P. pinnata* (Linnaeus) Pierre].
(=) *Pongam* Adanson, Fam. **2**: 322. 1763.
T.: 'H.M. 6. t. 3' [*Dalbergia arborea* Willdenow].
(=) *Galedupa* Lamarck, Enc. **2**: 594. 1788-89 ('1786').
T.: *G. indica* Lamarck.
(=) *Pungamia* Lamarck, Tabl. Enc. *t. 603.* 1796/7.

Note: (=) *Pungamia* Lamarck was validly published in 1796/7 by a plate with analysis. In 1823 Poiret (in Lamarck, Tabl. Enc. **3**: 148, 162) identified *Pungamia* with *Pongamia glabra* Ventenat.

3837. **Muellera** Linnaeus f., Suppl. 53, 329. 1781 sem. 2.
T.: *M. moniliformis* Linnaeus f.
(=) *Coublandia* Aublet, Pl. Guiane 937. 1775.
T.: *C. frutescens* Aublet.

3838. **Derris** Loureiro, Fl. Cochinch. 432. 1790.
T.: *D. trifoliata* Loureiro (*typ. cons.*).
(=) *Salken*, Adanson, Fam. **2**: 322. 1763.
T.: 'H.M. 8. t. 46'.
(=) *Solori* Adanson, Fam. **2**: 327. 1763.
T.: 'H.M. 6. t. 22'.
(=) *Deguelia* Aublet, Pl. Guiane 750. 1775.
T.: *D. scandens* Aublet.

3839. **Piscidia** Linnaeus, Syst. Nat. ed. 10. 1155, 1376. Mai-Jun 1759.
T.: *P. erythrina* (Loefling) Linnaeus 1759, nom. illeg. [*Piscipula erythrina* Loefling 1758; *Erythrina piscipula* Linnaeus 1753, *P. piscipula* (Linnaeus) Sargent].
(=) *Ichthyomethia* P. Browne, Hist. Jamaica 296. 1756.

Note: *Piscipula* Loefling, Iter Hisp. 275 (1758), is a superfluous name for *Ichthyomethia* P. Browne (1756).

3841. **Andira** A. L. Jussieu, Gen. 363. 1789 sem. 2.
T.: *A. racemosa* Lamarck ex Jaume Saint-Hilaire (Dict. Sci. Nat. **2**: 137. 1804).
(=) *Vouacapoua* Aublet, Pl. Guiane, Suppl. 9. 1775.
T.: *V. americana* Aublet.

Note 1: (by R. S. Cowan). Only one species was published with the description of the genus, and this must be considered to be the generic type rather than *A. inermis* (Wright) H.B.K.

Note 2: Lamarck (Enc. **1**: 171. Dec 1783) cites *Vouacapoua americana* so his genus *Andira* is not based on a new species and since he provides no generic diagnosis the name *Andira* is not validly published, neither is *A. racemosa* Lamarck. First valid publication is by A. L. Jussieu (1789).

The 1804 publication of *A. racemosa* is valid and legitimate because Saint-Hilaire does not cite another epithet that ought to have been adopted.

If *Andira* is to be conserved with the type species *A. inermis* (Wight) A. P. Decandolle, it should be *Andira* Decandolle, Prodr. **2**: 475 (1825). However, this is not desirable since Decandolle also included *A. racemosa* Jaume Saint-Hilaire, which is a taxonomic synonym of *Vouacapoua americana* Aublet.

3845. **Dipteryx** Schreber, Gen. **2**: 485. 1791.
T.: *D. odorata* (Aublet) Willdenow (*Coumarouna odorata* Aublet) (*typ. cons.*).
(≡) *Coumarouna* Aublet, Pl. Guiane 740. 1775.
(=) *Taralea* Aublet, Pl. Guiane 745. 1775.
T.: *T. oppositifolia* Aublet.

Note: (≡) *Heinzia* Scopoli, Intr. 301 (1777), was a superfluous name for *Coumarouna* Aublet (1775).

†3848. **Inocarpus** J. R. et G. Forster, Char. Gen. Pl. 65. 1776.
T.: *I. edulis* J. R. et G. Forster.

Note: Conservation superfluous: the name *Aniotum* [Solander ex] Parkinson, Journ. Voy. South. Seas 39 (1773), is not validly published (see Merrill, Chron. Bot. **14**: 347. 1954)

†3853. **Lens** P. Miller, Gard. Dict. Abr. ed. 4. 1754.
T.: *L. esculenta* Moench (Meth. 131. 1794) (*Ervum lens* Linnaeus).

Note: Conservation superfluous: *Lens* Linnaeus, Herb. Amb. 18 [Stickmann] (1754), is not validly published by means of a simple reference to a Rumphian species.

3858. **Centrosema** (A. P. Decandolle) Bentham, Comm. Legum. Gen. 53. 1837; Ann. Wiener Mus. **2**: 117. 1839 ('1840').
T.: *C. brasilianum* (Linnaeus) Bentham (*Clitoria brasiliana* Linnaeus) (*typ. cons.*).
(=) *Steganotropis* Lehmann, Ind. Sem. Hort. Hamb. **1826**: 18. 1826; Linnaea **3** (Litt.): 11. 1828.
T.: *S. conjugata* Lehmann.

Note: (=) *Bradburya* Rafinesque, Fl. Ludov. 104 (1817), is not available because of *Bradburia* Torrey et Gray 1842 (*nom. cons.*) (8840); (=) *Vexillaria* Bentham, Comm. Legum. Gen. 48, 53 (1837), is not available because of *Vexillaria* A. Eaton, Man. Bot. 82 (1817), which is an illegitimate substitute for *Clitoria* Linnaeus (1753).*

3860. **Amphicarpaea** S. Elliott, Journ. Acad. Nat. Sci. Phila. **1**: 372. Sep 1818 ('*Amphicarpa*'); corr. A. P. Decandolle, Prodr. **2**: 383. 1 Nov 1825.
T.: *A. monoica* (Linnaeus) S. Elliott, nom. illeg. [*Glycine monoica* Linnaeus, nom. illeg. (1763), *Glycine bracteata* Linnaeus, Sp. Pl. 754. (1753), *A. bracteata* (Linnaeus) Rickett et Stafleu, **comb. nov.**].
(V) *Amphicarpa* S. Elliott, Journ. Acad. Nat. Sci. Phila. **1**: 372. Sep 1818.
(=) *Falcata* J. F. Gmelin, Syst. **2**: 1131. 1791.
T.: *F. caroliniana* J. F. Gmelin.

Note: Savia Rafinesque (non Willdenow 1805) is nowhere validly published.

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* Eaton rejected Clitoria because J. E. Smith "so severely censured" the name Clitoria in Rees' Cyclopedia [J. E. Smith: "CLITORIA, in *Botany*, (from *κλειω*, *claudo*, *includo*, expressing the manner in which the essential organs of fructification are enclosed or shut up in the keel and wings of the corolla. Whatever may have been in the thoughts of Petiver, by whom the name was first introduced into botany; or of the illustrious naturalists, by whom it has since been continued, reformed, or sanctioned, we cannot refrain from entering our decided protest against every attempt to associate it directly with an anatomical term, to which, though derived from the same Greek theme, it has in fact only a very remote, factitious analogy. It is greatly to be lamented, that a fondness for these gross allusions should ever have been indulged by any, who, in all other respects, have deserved highly of natural science, and whose splendid talents should have rendered them far superior to such grovelling ideas. By this conduct they have done all in their power to pollute a study, which is, perhaps, more than all others, suited to the loveliest part of the human race, and which, without concealing any essential part of the sexual system, may easily be so conducted, as not to excite an unpleasant sensation in the most delicate female mind. We do not mean to exempt from the full severity of this censure our great master, Linnaeus, himself; for when, not only the purity of moral feeling, but also the common decorum of polished life, is infringed, the *nullius in verba* of the poet will, we trust, be uniformly our principle and our practice.)"]

3863. **Shuteria** Wight et Arnott, Prodr. 207. Oct 1834.
S. vestita Wight et Arnott (*typ. cons.*).

(H) *Shutereia* Choisy, Convolv. Or. 103. 1834 ante Sep; Mém. Soc. Phys. Hist. Nat. Genève **6**: 485. 1834 [CONVOLV.].
T.: *Convolvulus bicolor* Vahl (1794) (non Lamarck 1788).

†3868. **Kennedia** Ventenat, Jard. Malm. *t. 104.* Jul 1805 ('1804').
T.: *K. rubicunda* (Schneevoigt) Ventenat (*Glycine rubicunda* Schneevoigt).

Note: Conservation superfluous: (≡) *Caulinia* Moench, Meth. Suppl. 47 (1802), is not available on account of *Caulinia* Willdenow, Mém. Acad. Berlin **1798**: 87 (1801) [NAIAD.]. The spelling was changed to *Kennedya* by R. Brown in W. et W. T. Aiton, Hort. Kew ed. 2. **4**: 299 (1812). If this later spelling is to be retained conservation will still be necessary.

3871. **Rhodopis** Urban, Symb. Antill. **2**: 304. 20 Oct 1900.
T.: *R. planisiliqua* (Linnaeus) Urban (*Erythrina planisiliqua* Linnaeus).

(H) *Rhodopsis* Lilja, Fl. Sver. Suppl. **1**: 42. 1840 [PORTUL.].
≡ *Tegneria* Lilja 1839.

Note: Rhodopis Urban and *Rhodopsis* Lilja are perhaps not orthographic variants. It was thought, however, that confusion is possible and the two names have therefore been declared, under Art. 75, orthographic variants which are to be treated as homonyms.

†3874. **Apios** Boehmer in Ludwig, Def. Gen. Pl. 268. 1760.
T.: *A. americana* Medikus (Vorl. Churpf. Phys.-Ökon. Ges. **2**: 354. 1787) (*Glycine apios* Linnaeus).

Note: Conservation superfluous: (≡) *Bradlea* Adanson, Fam. **2**: 324, 527 (1763), is later. *Apios* was also used by A. Haller in this same sense in 1753 (Enum. 261) (pre-Linnaean). The '*Glycine* Linnaeus 1753 partim quoad spec. 1' formerly listed excluded the lectotype of *Glycine* Linnaeus (1753), which is now *G. javanica* Linnaeus (choice by M. L. Green, Prop. Brit. Bot. 176. 1929). The earlier choice of a lectotype for the genus *Glycine* by Britton and Brown (Ill. Fl. N.U.S. ed. 2. **2**: 418. 1913) (who choose *G. apios*) was rejected by this conservation in favour of Green's choice of *G. javanica.*

3876. **Butea** C. Konig ex Roxburgh, Asiat. Res. **3**: 469. 1792 (1795?).
T.: *B. frondosa* C. Konig ex Roxburgh (*typ. cons.*).

(=) *Plaso* Adanson, Fam. **2**: 325. 1763 prim.
T.: 'H.M. 6. t. 16 & 17'.

3877. **Mucuna** Adanson, Fam. **2**: 325, 579. 1763 prim.
T.: *M. urens* (Linnaeus) A. P. Decandolle (*Dolichos urens* Linnaeus) (*typ. cons.*).

(≡) *Zoophthalmum* P. Browne, Hist. Jamaica 295. 1756.
(=) *Stizolobium* P. Browne, Hist. Jamaica 290. 1756.
LT.: *S. pruriens* (Linnaeus) Medikus (*Dolichos pruriens* Linnaeus) (vide O. Kuntze, Rev. Gen. Pl. 207. 1891; Piper, U.S. Dep. Agr. Bur. Pl. Ind. Bull. **179**: 9. 1910).

3891. **Canavalia** Adanson, Fam. **2**: 325, 531. 1763 prim. ('*Canavali*'); corr. A. P. Decandolle, Prodr. **2**: 403. Nov 1825.
T.: *C. ensiformis* (Linnaeus) A. P. Decandolle (*Dolichos ensiformis* Linnaeus).

(V) *Canavali* Adanson, Fam. **2**: 325, 531. 1763 prim.

Note: (=) *Clementea* Cavanilles, Anal. Ci. Nat. **7**: 63 (1804) (non Cavanilles 1802, PTERID.), is not available and is moreover later than 1763, the date of the conserved name.

3892. **Cajanus** Adanson, Fam. **2**: 326, 529. 1763 prim. ('*Cajan*'); corr. A. P. Decandolle, Catal. Monsp. 85. 1813 trim. 1.
T.: *C. cajan* (Linnaeus) Millspaugh (*Cytisus cajan* Linnaeus).
(V) *Cajan* Adanson, Fam. **2**: 326, 529. 1763 prim.

3897. **Rhynchosia** Loureiro, Fl. Cochinch. 460. 1790.
T.: *R. volubilis* Loureiro.
(=) *Dolicholus* Medikus, Vorl. Churpf. Phys.-Ökon. Ges. **2**: 354. 1787.
T.: *D. flavus* Medikus, nom. illeg. (*Dolichos minimus* Linnaeus).

3908. **Pachyrhizus** L. C. Richard ex A. P. Decandolle, Prodr. **2**: 402. Nov 1825.
T.: *P. angulatus* L. C. Richard ex A. P. Decandolle, nom. illeg. [*Dolichos bulbosus* Linnaeus, *P. bulbosus* (Linnaeus) Kurz] (*typ. cons.*).
(≡) *Cacara* Thouars, Dict. Sci. Nat. **6**: 35. 1805 (1806?).

Note: The conserved name was spelled *Pachyrhyzus* by Decandolle in Mém. Légum. 379 (Apr-Mai 1826).

3914. **Psophocarpus** A. P. Decandolle, Prodr. **2**: 403. Nov 1825.
T.: *P. tetragonolobus* (Linnaeus) A. P. Decandolle (*Dolichos tetragonolobus* Linnaeus).
(≡) *Botor* Adanson, Fam. **2**: 326. 1763 prim.

GERANIACEAE

3931. **Wendtia** Meyen, Reise **1**: 307. 1834.
T.: *W. gracilis* Meyen.
(H) *Wendia* G. F. Hoffmann, Gen. Umbellif. 136. 1814 [UMBEL.].
T.: *W. chorodanum* G. F. Hoffmann.

Note: Both names commemorate the same 'Dr Wendt'.

3932. **Balbisia** Cavanilles, Anal. Ci. Nat. **7**: 61. Feb 1804.
T.: *B. verticillata* Cavanilles.
(H) *Balbisia* Willdenow, Sp. Pl. **3**: 2214. 1803 [COMP.].
T.: *B. elongata* Willdenow.

LINACEAE

3947. **Durandea** Planchon, London Journ. Bot. **6**: 594. 1847.
T.: *D. serrata* Planchon (London Journ. Bot. **7**: 528. 1848).
(H) *Durandea* Delarbre, Fl. Auvergne ed. 2. 365. 1800 [CRUCIF.].
T.: *D. unilocularis* Delarbre, nom. illeg. (*Raphanus raphanistrum* Linnaeus).

HUMIRIACEAE

3953. **Humiria** Aublet, Pl. Guiane 564. 1775 ('*Houmiri*'); corr. Jaume Saint-Hilaire, Expos. Fam. **2**: 374. 1805.
T.: *H. balsamifera* Aublet ('*Houmiri*' *balsamifera*).
(V) *Houmiri* Aublet, Pl. Guiane 564. 1775.

Note: The name dates from 1775 (Aublet), (≡) *Wernisekia* Scopoli, Intr. 273 (1777), and (≡) *Myrodendrum* Schreber, Gen. **1**: 358 (1789), are both illegitimate substitute names; (V) *Houmiria* Aublet (1775), orth. mut. A. L. Jussieu, Gen. 435 (1789), is another illegitimate change of spelling.

ZYGOPHYLLACEAE

3967. **Augea** Thunberg, Prodr. Pl. Cap. **1**: [viii], 80. 1794.
T.: *A. capensis* Thunberg.
(H) *Augia* Loureiro, Fl. Cochinch. 337. 1790 [ANAC.].
T.: *A. sinensis* Loureiro.

Note 1: Augia Loureiro (1790) is a nomen confusum, but it is validly published and counts as a homonym if there is any chance of confusion. This chance seems to be rather small. *Augea* is based on the personal name Johann Andreas Auge, *Augia* on Greek auge: αὐγή, gleam.

Note 2: Augea Thunberg, ex Retzius, Obs. **5**: 3 (1789), is a nomen nudum.

3973. **Larrea** Cavanilles, Anal. Hist. Nat. **2**: 119. Jun 1800.
T.: *L. nitida* Cavanilles (*typ. cons.*).

(H) *Larrea* Gomez Ortega, Nov. Rar. Pl. Hort. Matr. Descr. 15. 1797 [LEGUM.].
T.: *L. glauca* Gomez Ortega.

BALANITACEAE

3980. **Balanites** Delile, Fl. Égypte 77. 1813.
T.: *B. aegyptiaca* (Linnaeus) Delile (*Ximenia aegyptiaca* Linnaeus).

(≡) *Agialid* Adanson, Fam. **2**: 508. 1763.

RUTACEAE

3991. **Fagara** Linnaeus, Syst. Nat. ed. 10. **2**: 897, 1362. Mai-Jun 1759.
T.: *F. pterota* Linnaeus (*typ. cons.*).

(H) *Fagara* Duhamel, Traité Arb. Arbust. **1**: 229. 1755 [RUTAC.].
≡ *Zanthoxylum* Linnaeus 1753.
(≡) *Pterota* P. Browne, Hist. Jamaica 146. 1756.

Note: The typification of *Zanthoxylum* Linnaeus 1753 is discussed by F. R. Fosberg in Taxon **8**: 103 (1959).

3998. **Pentaceras** J. D. Hooker in Bentham et Hooker, Gen. Pl. **1**: 298. 7 Aug 1862.
T.: *P. australis* (F. Mueller) Bentham (Fl. Austr. **1**: 365. 1863) (*Cookia australis* F. Mueller).

(H) *Pentaceros* G. F. W. Meyer, Prim. Fl. Esseq. 136. 1818 [BYTTN.].
T.: *P. aculeatus* G. F. W. Meyer.

Note: (H) *Pentaceros* G. F. W. Meyer (1818) was spelled *Pentaceras* by Roemer et Schultes, Syst. **5**: 570 (1819-20).

4011. **Boenninghausenia** H. G. L. Reichenbach ex Meisner, Gen. **1**: 60; **2**: 44. 1837.
T.: *B. albiflora* (W. J. Hooker) Meisner (*Ruta albiflora* W. J. Hooker).

(H) *Boenninghausia* C. Sprengel, Syst. **3**: 153, 245. 1826 [LEGUM.].
T.: *B. vincentina* (Ker-Gawler) C. Sprengel (*Glycine vincentina* Ker-Gawler).

4012a. **Haplophyllum** A. H. L. Jussieu, Mém. Mus. Hist. Nat. Paris **12**: 464. 1825 ('*Aplophyllum*'); corr. H. G. L. Reichenbach, Fl. Germ. Exc. 766. 1832.
T.: *H. tuberculatum* A. H. L. Jussieu.

(V) *Aplophyllum* A. H. L. Jussieu, Mém. Mus. Hist. Nat. Paris **12**: 464. 1825.
(H) *Aplophyllum* Cassini, Dict. Sci. Nat. **33**: 464. Dec 1824 [COMP.].

4020. **Myrtopsis** Engler in Engler et Prantl, Nat. Pflanzenf. **3**(4): 137. 1896 (prim.).
T.: *M. novae-caledoniae* Engler.

(H) *Myrtopsis* O. Hoffmann, Linnaea **43**: 133. Jul 1881 [BARRINGT.].
T.: *M. malangensis* O. Hoffmann.

Note: Eriostemon novae-caledoniae Vieillard, sometimes cited as the basionym of the type-species, was never validly published as far as we know. Guillaumin, Not. Syst. **2**: 95 (1911) states that this was a manuscript name and lists it in the synonymy of *Myrtopsis novae-caledoniae* Engler.

4031. **Correa** H. Andrews, Bot. Repos. **1**: *t. 18.* 1 Apr 1798.
T.: *C. alba* H. Andrews.

(H) *Corraea* J. E. Smith, Trans. Linn. Soc. **4**: 219. post Mar 1798.
(H) *Correia* Vellozo in Vandelli, Fl. Lusit. Bras. 28. 1788 [OCHNAC.].

Note: Neither Smith nor Andrews mentions the other although their names probably refer to the same plant. Their works must have been almost simultaneously published — Smith's having been "read" in February. The descriptions seem completely independent, neither knowing of the other's. Andrews gives the source of his plant, Smith does not. If the Transactions came out as one volume, not in parts, then it was "post Mar"; in any case "post Feb". The date on Andrews' plate (1 Apr) may be misleading. For the purpose of the conservation it seems best to treat the two names as homonyms.

4035. **Calodendrum** Thunberg, Nov. Gen. Pl. 41. 10 Jul 1782.
T.: *C. capense* Thunberg.

(=) *Pallassia* Houttuyn, Nat. Hist. **2** (4): 382. 1775.
T.: *P. capensis* Christmann (Pflanzensyst. **3**: 318. 1778).

4036. **Barosma** Willdenow, Enum. Pl. Hort. Berol. 257. 1809 sem. 1.
T.: *B. serratifolia* (W. Curtis) Willdenow (*Diosma serratifolia* W. Curtis).

(=) *Parapetalifera* J. C. Wendland, Coll. Pl. **1**: 49. 1806 ('1808').
T.: *P. odorata* J. C. Wendland.

4037. **Agathosma** Willdenow, Enum. Pl. Hort. Berol. 259. 1809 sem. 1.
T.: *A. villosa* (Willdenow) Willdenow (*Diosma villosa* Willdenow).

(≡) *Bucco* J. C. Wendland, Coll. Pl. **1**: 13. 1805 ('1808').
(=) *Hartogia* Linnaeus, Syst. Nat. ed. 10. **2**: 939. Mai-Jun 1759.
T.: *H. capensis* Linnaeus.

4038. **Adenandra** Willdenow, Enum. Pl. Hort. Berol. 256. 1809 sem. 1.
T.: *A. uniflora* (Linnaeus) Willdenow (*Diosma uniflora* Linnaeus).

(=) *Haenkea* F. W. Schmidt, Neue Selt. Pfl. 19. 1793.
(=) *Glandulifolia* J. C. Wendland, Coll. Pl. **1**: 35. 1805 ('1808').
T.: *G. umbellata* J. C. Wendland.

4060. **Naudinia** Planchon et Linden, Ann. Sci. Nat. Bot. ser. 3. **19**: 79. ? Jan 1853.
T.: *N. amabilis* Planchon et Linden.

(H) *Naudinia* A. Richard in Sagra, Hist. Cuba 561. 1845 [MELAST.].
LT.: *N. argyrophylla* A. Richard (vide Mansfeld, Kew Bull. **1935**: 438).

4063. **Dictyoloma** A. H. L. Jussieu, Mém. Mus. Hist. Nat. Paris **12**: 499. 1825.
T.: *D. vandellianum* A. H. L. Jussieu.

(=) *Benjamina* Vellozo, Fl. Flum. 92. 1825 prim.; Ic. **2**: *t. 139*. 1835 ('1827').
T.: *B. alata* Vellozo.

Note: The conserved name was spelled *Dyctioloma* by A. P. Decandolle, Prodr. **2**: 89 (Nov 1825).

4065. **Chloroxylon** A. P. Decandolle, Prodr. **1**: 625. Jan 1824.
T.: *C. swietenia* A. P. Decandolle (*Swietenia chloroxylon* Roxburgh).

(H) *Chloroxylum* P. Browne, Hist. Jamaica 187. 1756 [RHAMN.].
T.: *Ziziphus chloroxylon* (Linnaeus) Oliver (*Laurus chloroxylon* Linnaeus).

Note: Another homonym: *Chloroxylon* Scopoli, Intr. 208 (1777) [INC. SEDIS].

4066. **Spathelia** Linnaeus, Sp. ed. 2: 386. Sep 1762.
T.: *S. simplex* Linnaeus.

(≡) *Spathe* P. Browne, Hist. Jamaica 187. 1756.

†4073. **Araliopsis** Engler in Engler et Prantl, Nat. Pflanzenf. **3** (4): 175. 1896.
T.: *A. soyauxii* Engler.

Note: Conservation superfluous: *Araliopsis* Kurz, Rep. And. Is. ed. 2. 39 (1870), was published in synonymy and *Araliopsis* Saporta et Marion, Mém. Cour. Sav. Étr. Acad. Roy. Belg. **41**(3): 78 (1878), was based only on a reference to an existing species. Neither name is validly published.

†4077. **Toddalia** A. L. Jussieu, Gen. 371. 1789 sem. 2.
T.: *T. asiatica* (Linnaeus) Lamarck (Tabl. Enc. **2**: 116. 1797 vel 1798) (*Paullinia asiatica* Linnaeus).

Note: Conservation superfluous: (=) *Cranzia* Schreber, Gen. **1**: 143 (1789 sem. 1) is a later homonym of *Crantzia* Scopoli, Intr. 173 (1777) [GESNER.].

4079. **Acronychia** J. R. et G. Forster, Char. Gen. Pl. 53. 1776.
T.: *A. laevis* J. R. et G. Forster.
(=) *Cunto* Adanson, Fam. **2**: 446. 1763 prim.

Note: *Jambolana* Adanson, Fam. **2**: 508 (1763) (≡ *Jambolifera* Linnaeus 1753) should not be listed here.

†4083. **Skimmia** Thunberg, Nov. Gen. Pl. 58. 18 Jun 1783.
T.: *S. japonica* Thunberg.

Note: Conservation superfluous: *Skimmi* Adanson, Fam. **2**: 364 (1763) (ING 10/02884), of the *Illiciaceae* is a different name and a later synonym and superfluous when published (*cf. 5113*) (≡ *Illicium* Linnaeus 1759), and there is no risk of confusion.

4089. **Micromelum** Blume, Bijdr. 137. 1825 sem. 2.
T.: *M. pubescens* Blume.
(=) *Aulacia* Loureiro, Fl. Cochinch. 273 1790.
T.: *A. falcata* Loureiro.

4090. **Murraya** J. G. Koenig ex Linnaeus, Mant. 554. Oct 1771 ('*Murraea*'); corr. Murray, Syst. Veg. 331. 1774.
T.: *M. exotica* Linnaeus.
(V) *Murraea* J. G. Koenig ex Linnaeus, Mant. 554. Oct 1771.
(=) *Camunium* Adanson, Fam. **2**: 166. 1763 prim.
T.: *Chalcas paniculata* Linnaeus (Syst. Nat. ed. 12. 293; Mant. 68. Oct?-Nov 1767).
(=) *Bergera* J. G. Koenig ex Linnaeus, Mant. 555, 563. Oct 1771.
T.: *B. koenigii* Linnaeus.

Note: (=) *Chalcas* Linnaeus, Mant. 68 (1767), ≡ *Camunium* Adanson, Fam. **2**: 166 (1763), and is hence illegitimate.

4096. **Atalantia** Correa, Ann. Mus. Hist. Nat. Paris **6**: 383. 1805.
T.: *A. monophylla* A. P. Decandolle (Prodr. **1**: 535. Jan 1824).
(=) *Malnaregam* Adanson, Fam. **2**: 345. 1763 prim.

Note: The addition of (=) *Phantis* Adanson, Fam. **2**: 448 (1763) was proposed by Rothmaler, Repert. Sp. Nov. **53**: 20 (1944).

4099. **Aegle** Correa, Trans. Linn. Soc. **5**: 222. 1800.
T.: *A. marmelos* (Linnaeus) Correa (*Crateva marmelos* Linnaeus).
(≡) *Belou* Adanson, Fam. **2**: 408. 1763 prim.

SIMAROUBACEAE

4109. **Samadera** J. Gaertner, Fruct. **2**: 352. 1791.
T.: *S. indica* J. Gaertner.
(=) *Locandi* Adanson, Fam. **2**: 449. 1763 prim.
T.: *Niota pentapetala* Poiret (in Lamarck, Enc. **4**: 490. 1798).

4118. **Castela** Turpin, Ann. Mus. Hist. Nat. Paris **7**: 78. 1806.
T.: *C. depressa* Turpin.
(H) *Castelia* Cavanilles, Anal. Ci. Nat. **3**: 134. 1801 [VERBEN.].
T.: *C. cuneato-ovata* Cavanilles

†4120. **Brucea** J. F. Miller, Ic. Anim. Pl. *t.* 25. 1779.
T.: *B. antidysenterica* J. F. Miller.

Note: Conservation superfluous: *Lussa* Rumphius, Auct. **7**: 27 (1755), was not validly published (two species, no generic diagnosis).

4124. **Ailanthus** Desfontaines, Mém. Acad. Sci. Paris **1786**: 265. 1788.
T.: *A. glandulosus* Desfontaines ('*glandulosa*').

(?) *Pongelion* Adanson, Fam. **2**: 319. 1763 prim.
T.: *Adenanthera triphysa* Dennstedt.

Note: Conservation apparently superfluous: *Pongelion* Adanson, based on "H.M. 6. 7. 15", belongs to the Leguminosae. It is not clear to us why *Alianthus* has been conserved over it.

4131. **Picramnia** Swartz, Prodr. 2, 27. Jun-Jul 1788.
T.: *P. antidesma* Swartz.

(=) *Pseudo-brasilium* Adanson, Fam. **2**: 341. 1763 prim.
T.: *Brasiliastrum americanum* Lamarck (Enc. **1**: 462. 1785).

(=) *Tariri* Aublet, Pl. Guiane 37. 1775.
T.: *T. guianensis* Aublet.

Note: (=) *Brasiliastrum* Lamarck, Enc. **1**: 462 (1785) is a superfluous name for the validly published (=) *Pseudobrasilium* Adanson (1763).

BURSERACEAE

4137. **Protium** N. L. Burmann, Fl. Ind. 88. 1768.
T.: *P. javanicum* N. L. Burmann.

(≡) *Tingulong* Rumphius, Auct. 54. 1755.

Note: (≡) *Tingulong* Rumphius is doubtfully valid: it might be argued that it is a uninomial designation of a species; it may also be considered a vernacular name.

4150. **Bursera** N. J. Jacquin ex Linnaeus, Sp. Pl. ed. 2. 471. Sep 1762.
T.: *B. gummifera* Linnaeus, nom. illeg. [*Pistacia simaruba* Linnaeus, *Bursera simaruba* (Linnaeus) Sargent].

(≡) *Simaruba* Boehmer in Ludwig, Def. 513. 1760.

(=) *Elaphrium* N. J. Jacquin, Enum. Pl. Carib. 3, 19. Mai 1760.

Note 1: (≡) *Terebinthus* P. Browne, Hist. Jamaica 345 (1756) is not available because of *Terebinthus* P. Miller, Gard. Dict. Abr. ed. 4. (1754) [ANACARD.].

Note 2: Bursera was spelled *Burseria* by Jacquin himself in Sel. Stirp. Am. Hist. 94 (1763).

4151. **Commiphora** N. J. Jacquin, Hort. Schoenbr. **2**: 66. 1797.
T.: *C. madagascarensis* N. J. Jacquin.

(=) *Balsamea* Gleditsch, Schr. Berl. Ges. Naturf. Fr. **3**: 127. 1782.
T.: *B. meccanensis* Gleditsch.

MELIACEAE

4172. **Naregamia** Wight et Arnott, Prodr. 116. Oct (prim.) 1834.
T.: *N. alata* Wight et Arnott.

(≡) *Nelanaregam* Adanson, Fam. **2**: 343. 1763 prim.

4189. **Aglaia** Loureiro, Fl. Cochinch. 173. 1790.
T.: *A. odorata* Loureiro.

(H) *Aglaia* Allamand, Nova Acta Acad. Leop.-Carol. **4**: 93. 1770 [CYPER.].

Note 1: Camunium Adanson, Fam. **2**: 166 (1763), should not be mentioned here; it belongs to 4090, where it is correctly placed as a synonym of *Murraya* Linnaeus (1771) (*nom. cons.*).

Note 2: Rothmaler (Repert. Sp. Nov. **53**: 19. 1944) proposes to add (=) *Nialel* Adanson, Fam. **2**: 446 (1763).

4190. **Guarea** Allemand ex Linnaeus, Mant. 150, 228 ('*Guara*'). Oct 1771.
T.: *Guarea trichilioides* Linnaeus, nom. illeg. [*Melia guara* N. J. Jacquin, Enum. Pl. Carib. 20. Mai 1760; *G. guara* (N. J. Jacquin) P. Wilson, N. Am. Fl. **25**: 265. 1924].
(=) *Elutheria* P. Browne, Hist. Jamaica 369. 1756.

†4195. **Trichilia** P. Browne, Hist. Jamaica 278. 1756.
T.: *T. hirta* Linnaeus (Syst. ed. 10. 1020. 1759) (*typ. cons.*).

Note: Conservation superfluous: *Halesia* Loefling, Iter Hisp. 188 (1758), was published in synonymy. The citation of *T. glabra* Linnaeus in the Code was due to an error in the original list of standard species proposed by M. L. Green. In that list it is clearly said that *T. hirta* Linnaeus is the lectotype but *T. glabra* is erroneously mentioned as the type in the line preceding the arguments. The choice of *T. hirta* is also taxonomically preferable [see also P. Wilson, N. Am. Fl. **25**: 226 (1924), and Harms in Engler et Prantl, Nat. Pflanzenf. ed. 2. **19b** (1): 104 (1940)].

MALPIGHIACEAE

4222. **Rhyssopteris** Blume ex A. H. L. Jussieu in Delessert, Ic. **3**: 21. 1837 ('*Ryssopterys*').
T.: *R. timorensis* A. H. L. Jussieu.
(V) *Ryssopterys* Blume ex A. H. L. Jussieu in Delessert, Ic. **3**: 21. 1837.

Note: We have not been able to find a place where the etymologically correct form of the name, as conserved here, is used. The rejected spelling *Ryssopterys* is in general use (see also Niedenzu's monograph in Pflanzenreich **93**: 281. 1928). Since conservation is meant to preserve usage of the past rather than dictate usage of the future this case of conservation seems ill-advised to us.

4226. **Heteropteris** Humboldt, Bonpland et Kunth, Nova Gen. Sp. **5**: ed. fol. 126; ed. qu. 163. Feb 1822.
T.: *H. purpurea* (Linnaeus) Humboldt, Bonpland et Kunth (*Banisteria purpurea* Linnaeus) (*typ. cons.*).
(=) *Banisteria* Linnaeus, Sp. Pl. 427. 1753.
LT.: *B. brachiata* Linnaeus (vide T. A. Sprague, Gard. Chron. ser. 3. **75**: 104. 1924; M. L. Green, Prop. Brit. Bot. 156. 1929).

4234. **Ptilochaeta** Turczaninow, Bull. Soc. Nat. Moscou **16**: 52. 1843 prim.
T.: *B. bahiensis* Turczaninow.
(H) *Ptilochaeta* C. G. Nees in C. F. P. Martius, Fl. Bras. **2** (1): 147. 1 Apr 1842 [CYPER.].
T.: *P. diodon* C. G. Nees.

4247. **Lophanthera** A. H. L. Jussieu, Ann. Sci. Nat. Bot. ser. 2. **13**: 328. Jun 1840.
T.: *L. kunthiana* A. H. L. Jussieu, nom. illeg. [*Galphimia longifolia* Kunth, *Lophanthera longifolia* (Kunth) Grisebach].
(H) *Lophanthera* Rafinesque, New Fl. **2**: 58. 1837 sem. 2 ('1836') [SCROPHUL.].
T.: *Gerardia delphinifolia* Linnaeus.

TRIGONIACEAE

†4264. **Trigoniastrum** Miquel, Fl. Ind. Bat. Suppl. 394. 1761.
T.: *T. hypoleucum* Miquel.

Note: Conservation superfluous: *Isopteris* Wallich, Num. List no. 7261 (1832), is a *nomen nudum.*

VOCHYSIACEAE

4266. **Vochysia** Aublet, Pl. Guiane 18. 1775 ('*Vochy*'); corr. Poiret in Lamarck Enc. **8**: 681. 1808.
T.: *V. guianensis* Aublet ('*Vochy*' *guianensis*).
(V) *Vochy* Aublet, Pl. Guiane 18. 1775.

Note: Other illegitimate variant spellings are: *Vochya,* Vandelli, Fl. Lusit. Bras. 1 (1788), and *Vochisia,* A. L. Jussieu, Gen. 424 (1789).

Note 2: (≡) *Salmonia* Scopoli, Intr. 209 (1777), and (≡) *Cucullaria* Schreber, Gen. **1**: 6 (1789), are superfluous names for *Vochy* Aublet (1775).

POLYGALACEAE

4275. **Securidaca** Linnaeus, Syst. Nat. ed. 10. 1155. Mai-Jun 1759.
T.: *S. volubilis* Linnaeus 1759 non Linnaeus 1753; syn. tax.: *S. diversifolia* (Linnaeus) Blake (Contr. U.S. Nat. Herb. **23**: 594. 18 Jul 1923) (*Polygala diversifolia* Linnaeus).
(H) *Securidaca* Linnaeus, Sp. Pl. 707. 1753.
T.: *S. volubilis* Linnaeus.
(≡) *Elsota* Adanson, Fam. **2**: 358. 1763 prim.

Note: Another homonym: *Securidaca* P. Miller, Gard. Dict. Abr. ed. 4 (1754) [LEGUM.].

†4277. **Salomonia** Loureiro, Fl. Cochinch. 1, 14. 1790.
T.: *S. cantoniensis* Loureiro.

Note: Conservation superfluous: *Salomonia* Heister ex Fabricius, Enum. ed. 1. 20 (1759), ed. 2. 38 (1763), ed. 3. 38 (1776), is a *nomen nudum.* Heister's name was published without a description in his Syst. Pl. 5 (1748).

4281. **Xanthophyllum** Roxburgh, Pl. Corom. **3**: 81. 1820 ('1819').
T.: *X. flavescens* Roxburgh (*typ. cons.*).
(=) *Pelae* Adanson, Fam. **2**: 448. 1763 prim.

EUPHORBIACEAE

†4297. **Securinega** Commerson ex A. L. Jussieu, Gen. 388. 1789 sem. 2.
T.: *S. durissima* J. F. Gmelin (Syst. **2**: 1008. 1791) (*typ. cons.*).
(=) *Acidoton* P. Browne, Hist. Jamaica 355. 1756.
T.: *Adelia acidoton* Linnaeus (Syst. Nat. ed. 10. 1298. 1759) [*Securinega acidoton* (Linnaeus) Fawcett et Rendle].

Note: Conservation now superfluous: *Acidoton* P. Browne (1756) is unavailable because of *Acidoton* Swartz (1788) (*nom. cons.*, 4415). Since *Acidoton* P. Browne was only a taxonomic synonym of *Securinega* A. L. Jussieu (1789), the latter was legitimate on publication.

4331. **Buraeavia** Baillon, Adansonia **11**: 83. 15 Nov 1873.
T.: *B. carunculata* (Baillon) Baillon (*Baloghia carunculata* Baillon).
(H) *Bureava* Baillon, Adansonia **1**: 71. 3 Jan 1861 [COMBR.].
T.: *B. crotonoides* Baillon.

4349. **Julocroton** C. F. P. Martius, Flora **20** (2) (Beibl. 8): 119. 21 Oct 1837.
T.: *J. phagedaenicus* C. F. P. Martius.
(=) *Cieca* Adanson, Fam. **2**: 355. 1763 prim.
T.: *Croton argenteum* Linnaeus.

4355. **Chrozophora** A. H. L. Jussieu, Euphorb. Gen. Tent. 27. Jan-Feb 1824 ('*Crozophora*'); corr. Bentham et Hooker, Gen. Pl. **3**(1): 305. 7 Feb 1880.
T.: *C. tinctoria* (Linnaeus) A. H. L. Jussieu, Euphorb. Gen. Tent. 28. *t.* 7. *fig.* 25. Jan-Feb 1824 ('*Crozophora*') (*Croton tinctorium* Linnaeus).
(≡) *Tournesol* Adanson, Fam. **2**: 356. 1763.

Note 1: Ricinoides P. Miller, Gard. Dict. Abr. ed. 4 (1754), is probably also identical with *Chrozophora* A. H. L. Jussieu. *Croton tinctorium* Linnaeus is included in the concept, but types of other genera may likewise be included. If the Miller genus is lectotypified by *C. tinctorium*, *Tournesol* Adanson becomes superfluous.

Note 2: (≡) *Tournesolia* Scopoli, Intr. 243 (1777), is a variant spelling of (≡) *Tournesol* Adanson (1763).

4397. **Adelia** Linnaeus, Syst. Nat. ed. 10. 1298. 1298. Mai-Jun 1759.
T.: *A. ricinella* Linnaeus (*typ. cons.*).
(H) *Adelia* P. Browne, Hist. Jamaica 361. 1756 [OLEAC.].
(≡) *Bernardia* P. Browne, Hist. Jamaica 361. 1756.

4415. **Acidoton** Swartz, Prodr. 6, 83. Jun-Jul 1788.
T.: *A. urens* Swartz.
(H) *Acidoton* P. Browne, Hist. Jamaica 355. 1756 [EUPHORB.] (see 4297).
T.: *Adelia acidoton* Linnaeus (Syst. Nat. ed. 10. 1298. 1759).

4421. **Pterococcus** Hasskarl, Flora **25** (2) (Beibl. 41): 7 Aug 1842.
T.: *P. glaberrimus* Hasskarl, nom. illeg. [*Plukenetia corniculata* J. E. Smith, *P. corniculatus* (J. E. Smith) Pax et K. Hoffmann].
(H) *Pterococcus* Pallas, Reise Russ. Reich. **2**: 738. 1773 [POLYGON.].
T.: *P. aphyllus* Pallas.

4435. **Micrandra** Bentham, Journ. Bot. Kew Misc. **6**: 371. 1854.
T.: *M. siphonioides* Bentham (*typ. cons.*).
(H) *Micrandra* Brown et Bennett, Pl. Jav. Rar. 237. Nov 1844 [EUPHORB.].
T.: *M. ternata* Brown et Bennett.

4449. **Trigonostemon** Blume, Bijdr. 600. 1825 ('*Trigostemon*'); corr. Fl. Jav. praef. viii. 1828.
T.: *T. serratus* Blume ('*serratum*').
(=) *Enchidium* Jack, Malay. Misc. **2**: 89. 1822.
T.: *E. verticillatum* Jack.

4452. **Sagotia** Baillon, Adansonia **1**: 53. 1 Dec 1860.
T.: *S. racemosa* Baillon.
(H) *Sagotia* Duchassaing et Walpers, Linnaea **23**: 737. 1850 [LEGUM.].
T.: *S. triflora* (Linnaeus) Duchassaing et Walpers (*Hedysarum triflorum* Linnaeus).

4454. **Codiaeum** A. H. L. Jussieu, Euphorb. Gen. Tent. 33. Jan-Feb 1824.
T.: *C. variegatum* (Linnaeus) Blume [Bijdr. 606. 1825 (Dec 1825 or 1826 trim. 1) ('1825')] (*Croton variegatum* Linnaeus) (*typ. cons.*).
(≡) *Phyllaurea* Loureiro, Fl. Cochinch. 375. 1790.

4467. **Chaetocarpus** Thwaites, Journ. Bot. Kew Misc. **6**: 300. *t.* 10*a*. 1854.
T.: *C. pungens* Thwaites, nom. illeg. [*C. castanicarpus* (Roxburgh) Thwaites (Enum. Pl. Zeyl. 275. 1861, '*Castanocarpus*'), *Adelia castanicarpa* Roxburgh].
(H) *Chaetocarpus* Schreber, Gen. **1**: 75. 1789 sem. 1 [SAPOT.].
≡ *Pouteria* Aublet 1775.

4470. **Endospermum** Bentham, Fl. Hongk. 304. 1861.
T.: *E. chinense* Bentham.
(H) *Endespermum* Blume, Catal. Buitenzorg 24. 1823 [LEGUM.].
T.: *E. scandens* Blume.
Note: Blume's name was spelled *Endospermum* by Endlicher (Gen. Pl. 1304. 1841).

4472. **Omphalea** Linnaeus, Syst. Nat. ed. 10. 1264, 1378. Mai-Jun 1759.
T.: *O. triandra* Linnaeus (*typ. cons.*).
(≡) *Omphalandria* P. Browne, Hist. Jamaica 1756.

4498a. **Tithymalus** Trew, Herb. Blackw. **2**: *t. 123.* 1754.
T.: *T. peplus* (Linnaeus) J. Gaertner (Fruct. **2**: 115. 1791) (*Euphorbia peplus* Linnaeus).
(H) *Tithymalus* P. Miller, Gard. Dict. Abr. ed. 4. 1754 [EUPHORB.].
T.: *T. my[r]tifolius* P. Miller.

4501. **Pedilanthus** Poiteau, Ann. Mus. Hist. Nat. Paris **19**: 388. 1812.
T.: *P. tithymaloides* (Linnaeus) Poiteau (*Euphorbia tithymaloides* Linnaeus).
(≡) *Tithymaloides* Gomez Ortega, Tab. Bot. 9. 1773.
Note 1: For lectotypification of (≡) *Tithymaloides* Gomez Ortega (1773) vide Wheeler, Contr. Gray Herb. **124**: 45 (1939) (ING 40/06504). (=) *Tithymalus* P. Miller (Gard. Dict. Abr. ed. 4. 1754; T.: *T. my[r]tifolius* P. Miller) is not available because of *Tithymalus* Trew 1754 (*nom. cons.* 4498a).
Note 2: (=) *Ventenatia* Trattinick, Gen. Pl. 86 (1802) is not available because of (272) *Ventenata* Koeler 1802 (*nom. cons.*); (≡) *Crepidaria* Haworth. Syn. Pl. Succ. 136 (1812) is a superfluous name for (≡) *Tithymaloides* Gomez Ortega (1773).

4516. **Botryophora** J. D. Hooker, Fl. Brit. India **5**: 476. Dec 1888.
T.: *B. kingii* J. D. Hooker.
(H) *Botryophora* Bompard, Hedwigia **6**: 119. 1867 [ALGAE].
T.: *B. dichotoma* Bompard.
Note: Another homonym: *Botryophora* J. Agardh, Lunds Univ. Årsskr. **23**: 139 (1887) [ALGAE].

LIMNANTHACEAE

4542. **Limnanthes** R. Brown, London Edinb. Dublin Philos. Mag. **3**: 70. 1833.
T.: *L. douglassii* R. Brown.
(H) *Limnanthes* Stokes, Mat. Med. **1**: 300 (1812) [GENTIAN.].
≡ *Limanthemum* S. G. Gmelin 1769.

ANACARDIACEAE

4563. **Lannea** A. Richard in Guillemin, Perrottet et Richard, Fl. Seneg. Tent. **1**: 153. 1831.
T.: *L. velutina* A. Richard (*typ. cons.*).
(=) *Calesiam* Adanson, Fam. **2**: 446. 1763.
T.: *Calsiama malabarica* Rafinesque (Sylva Tell. 12. 1838 trim. 4).
Note 1: (=) *Odina* Roxburgh was not validly published until 1832.
Note 2: Haberlia Dennstedt, Schluess. 30 (1818), was not validly published (by reference to species only).

4578. **Campnosperma** Thwaites, Journ. Bot. Kew Misc. **6**: 65. 1854.
T.: *C. zeylanicum* Thwaites.
(=) *Coelonyrum* Jack, Malay. Misc. **2** (7): 65. 1822.
T.: *C. coriaceum* Jack.

4600. **Nothopegia** Blume, Mus. Bot. 203. Apr 1850.
T.: *N. colebrookiana* (R. Wight) Blume (*Pegia colebrookiana* R. Wight).
(=) *Glycycarpus* Dalzell, Journ. Roy. Asiat. Soc. Bombay **3** (1): 69. 1849.
T.: *G. edulis* Dalzell.

4604. **Holigarna** Buchanan-Hamilton ex Roxburgh, Pl. Corom. **3**: 79. Feb-Mar 1820 ('1819').
T.: *H. longifolia* Buchanan-Hamilton ex Roxburgh.
(=) *Katou-Tsjeroe* Adanson, Fam. **2**: 84, 534. 1763.
T.: 'H.M. 4. t. 9'.

Note: *Hadestaphyllum* Dennstedt, Schluess. 30 (1818), is not validly published (by reference to a species only).

AQUIFOLIACEAE

4615. **Nemopanthus** Rafinesque, Am. Mon. Mag. Crit. Rev. **4**: 357. Mar 1819.
T.: *N. fascicularis* Rafinesque, nom. illeg. [*Ilex canadensis* A. Michaux, *N. canadensis* (A. Michaux) A. P. Decandolle].
(=) *Ilicioides* Dumont Courset, Bot. Cult. **4**: 27. 1802.

CELASTRACEAE

4623. **Denhamia** Meisner, Gen. **1**: 18; **2**: 16. Mar-Apr 1837.
T.: *D. obscura* (A. Richard) Meisner (*Leucocarpum obscurum* A. Richard).
(H) *Denhamia* Schott in Schott et Endlicher, Melet. Bot. 19. 1832 [ARAC.].
T.: *D. scandens* (Beauvois) Schott (*Culcasia scandens* Beauvois).
(≡) *Leucocarpum* A. Richard, Sert. Astrolab. 46. 1834.

Note: (H) *Denhamia* Schott is not identical with *Culcasia* Beauvois, Fl. Oware **1**: 3 (1810), although it is based on its only species. *Culcasia* was superfluous on publication, because of the reference, under the generic name, to *Caladium* Ventenat (1800). Its type is therefore the type of the latter.

4627. **Gymnosporia** (Wight et Arnott) J. D. Hooker in Bentham et Hooker, Gen. Pl. **1**: 365. 7 Aug 1862.
T.: *G. montana* (Roth ex Roemer et Schultes) Bentham (Fl. Austr. **1**: 400. 1863) (*Celastrus montanus* Roth ex Roemer et Schultes) (*typ. cons.*).
(=) *Catha* Forskål, Fl. Aeg.-Arab. 63. 1775.
T.: *C. spinosa* Forskål.
(=) *Scytophyllum* Ecklon et Zeyher, Enum. 124. Dec 1834 vel 1835 prim.
(=) *Encentrus* K. B. Presl, Abh. Böhm. Ges. Wiss. ser. 5. **3**: 463. 1845.
T.: *E. linearis* (Linnaeus f.) K. B. Presl (*Celastrus linearis* Linnaeus f.).
(=) *Polyacanthus* K. B. Presl, Abh. Boehm. Ges. Wiss. ser. 5. **3**: 463. 1845.
T.: *P. stenophyllus* (Ecklon et Zeyher) K. B. Presl (*Celastrus stenophyllus* Ecklon et Zeyher).

4637. **Plenckia** Reisseck in C. F. P. Martius, Fl. Bras. **11** (1): 29. 15 Feb 1861.
T.: *P. populnea* Reisseck.
(H) *Plenckia* Rafinesque, Specchio **1**: 194. 1 Jun 1814 [AIZOAC.].
T.: *P. setiflora* (Forskål) Rafinesque (*Glinus setiflorus* Forskål).

Note: *Plenckia* Mociño et Sessé ex A. P. Decandolle, Prodr. **1**: 724 (1824), was published in synonymy.

ICACINACEAE

4693. **Mappia** N. J. Jacquin, Hort. Schoenbr. **1**: 22. 1797.
T.: *M. racemosa* N. J. Jacquin.
(H) *Mappia* Adanson, Fam. **2**: 193, 574. 1763 prim.
≡ *Cunila* Linnaeus 1759.

Note: Another homonym: *Mappia* Schreber, Gen. **2**: 806 (1791) (= *Soramia* Aublet 1775, DILLEN.).

†4709. **Pyrenacantha** R. Wight, Bot. Misc. **2**: 107. Nov-Dec 1830.
T.: *P. volubilis* R. Wight.

Note: Conservation superfluous: (=) *Cavanilla* Thunberg, Nova Gen. Pl. 105 (1792), is not available because of *Cavanilla* J. F. Gmelin, Syst. **2**: 1037 (1791) (≡ *Dombeya* Cavanilles 1786, *nom. cons.*, 5053), and *Cavanillea* Medikus, Malven-Fam. 19 (1787).

4715. **Stachyanthus** Engler in Engler et Prantl, Nat. Pflanzenf. Nachtr. **3** (5): 227. Oct 1897.
T.: *S. zenkeri* Engler.

(H) *Stachyanthus* A. P. Decandolle, Prodr. **5**: 84. Oct 1836 [COMPOS.].
T.: *S. martii* A. P. Decandolle.

SAPINDACEAE

4730. **Bridgesia** Bertero ex Cambessèdes, Nouv. Ann. Mus. Hist. Nat. Paris **3**: 234. 1834.
T.: *B. incisifolia* Bertero ex Cambessèdes.

(H) *Bridgesia* W. J. Hooker, Bot. Misc. **2**: 222. 1831 [COMPOS.].
T.: *B. echinopsoides* W. J. Hooker.

Note: Another homonym: *Bridgesia* Hooker et Arnott, Bot. Misc. **3**: 168 (1833) [PHYTOL.].

4733. **Thouinia** Poiteau, Ann. Mus. Hist. Nat. Paris **3**: 70. 1804.
T.: *T. simplicifolia* Poiteau (*typ. cons.*).

(H) *Thouinia* Thunberg ex Linnaeus f., Suppl. 9, 89. 1781 (sem. 2) [OLEAC.].
T.: *T. nutans* Linnaeus f.

Note: Another homonym: *Thouinia* J. E. Smith, Pl. Ic. Ined. *t.* 7 (1789) [CONVOLV.].

4747. **Zollingeria** Kurz, Journ. Roy. Asiat. Soc. Bengal **41** (2): 303. 1872.
T.: *Z. macrocarpa* Kurz.

(H) *Zollingeria* K. H. Schultz, Flora **37**: 273. 14 Mai 1854 [COMP.].
T.: *Z. scandens* K. H. Schultz.

4753. **Pancovia** Willdenow, Sp. Pl. **2**: 285. 1799.
T.: *P. bijuga* Willdenow.

(H) *Pancovia* Adanson, Fam. **2**: 294. 1763 prim. [ROSAC.].
≡ *Comarum* Linnaeus 1753.

4767. **Schleichera** Willdenow, Sp. Pl. **4**: 1096. 1806.
T.: *S. trijuga* Willdenow.

(=) *Cussambium* Lamarck, Enc. **2**: 230. 1786.
T.: *C. spinosum* F. Hamilton (Mem. Wern. Soc. **5**: 357. 1826).

Note: (=) *Koon* J. Gaertner, Fruct. **2**: 486 (1791), is only a vernacular name.

4820. **Mischocarpus** Blume, Bijdr. 238. 1825 (prob. Dec).
T.: *M. sundaicus* Blume.

(=) *Pedicellia* Loureiro, Fl. Cochinch. 641, 655. 1790.
T.: *P. oppositifolia* Loureiro.

RHAMNACEAE

4862. **Condalia** Cavanilles, Anal. Hist. Nat. **1**: 39. Oct 1799.
T.: *C. microphylla* Cavanilles.

(H) *Condalia* Ruiz et Pavon, Prodr. 11. 1794.
T.: *C. repens* Ruiz et Pavon.

4874. **Scutia** Commerson ex A. T. Brongniart, Ann. Sci. Nat. Bot. **10**: 362. Apr 1827.
T.: *S. indica* A. T. Brongniart, nom. illeg. [*Rhamnus circumscissus* Linnaeus f., *S. circumcissa* (Linnaeus f.) Druce].

(=) *Adolia* Lamarck, Enc. **1**: 44. Dec 1783.

†4882. **Colubrina** L. C. Richard ex A. T. Brongniart, Ann. Sci. Nat. **10**: 368. Apr 1827.
T.: *C. ferruginosa* A. T. Brongniart (*Rhamnus colubrinus* N. J. Jacquin) (*typ. cons.*).

Note: Conservation superfluous; (=) *Marcorella* Necker, Elem. **2**: 122 (1790) was not taken up until 1838 by Rafinesque, Sylva Tell. 31 (1838). *Tubanthera* Commerson ex A. P. Decandolle, Prodr. **2**: 30 (1825), was published in synonymy.

4899. **Colletia** Commerson ex A. L. Jussieu, Gen. 180. 1789 sem. 2.
T.: *C. spinosa* Lamarck (Tabl. Enc. **2**: 91. 1798).

(H) *Colletia* Scopoli, Intr. 207. 1777 [ULMAC.].
T.: *Rhamnus iguanaea* N. J. Jacquin (Enum. Pl. Carib. 16. Mai 1760).

4905. **Helinus** E. Meyer ex Endlicher, Gen. Pl. 1102. Apr 1840.
T.: *H. ovatus* E. Meyer, nom. illeg. [*Rhamnus mystacinus* W. Aiton, *H. mystacinus* (W. Aiton) E. Meyer ex Steudel].

(≡) *Mystacinus* Rafinesque, Sylva Tell. 30. 1838 trim. 4.
T.: *M. cirrhiferus* Rafinesque, nom. illeg. (*Rhamnus mystacinus* W. Aiton).

VITACEAE

4910. **Ampelocissus** J. E. Planchon, Vigne Am. **8**: 371. Dec 1884.
T.: *A. latifolius* (Roxburgh) J. E. Planchon (*'latifolia'* l.c. p. 374) (*Vitis latifolia* Roxburgh).

(=) *Botria* Loureiro, Fl. Cochinch. 153. 1790.
T.: *B. africana* Loureiro.

†4915. **Parthenocissus** Planchon in A. et C. Decandolle, Monogr. Phan. **5**: 447. Jul 1887.
T.: *P. quinquefolia* (Linnaeus) Planchon (*Hedera quinquefolia* Linnaeus).

Note: Conservation superfluous; (≡) *Quinaria* Rafinesque, Med. Fl. **2**: 122 (1830), is not available because of *Quinaria* Loureiro, Fl. Cochinch. 272 (1790).

4918a. **Cayratia** A. L. Jussieu, Dict. Sci. Nat. **10**: 103. Mai 1818.
T.: *C. pedata* (Loureiro) A. L. Jussieu ex Gagnepain (Not. Syst. Paris **1**: 346. 5 Feb 1911) (*Columella pedata* Loureiro).

(≡) *Columella* Loureiro, Fl. Cochinch. 85. 1790.
(=) *Lagenula* Loureiro, Fl. Cochinch. 88. 1790.
T.: *L. pedata* Loureiro.

TILIACEAE

4927. **Aristotelia** L'Héritier, Stirp. Nov. 31. Apr 1786 ('1784').
T.: *A. macqui* L'Héritier.

(H) *Aristotela* Adanson, Fam. **2**: 125. 1763 prim. [COMP.].
≡ *Othonna* Linnaeus 1753.

4938. **Berrya** Roxburgh, Pl. Corom. **3**: 60. Feb-Mar 1820 (*'Berria'*); corr. A. P. Decandolle, Prodr. **1**: 517. Jan 1824.
T.: *B. ammonilla* Roxburgh.

(V) *Berria* Roxburgh, Pl. Corom. **3**: 60. Feb-Mar 1820.
(=) *Espera* Willdenow, Neue Schr. Ges. Naturf. Fr. Berlin **3**: 450. 1801.
T.: *E. cordifolia* Willdenow.

4948. **Ancistrocarpus** Oliver, Journ. Linn. Soc. Bot. **9**: 173. 1865 ('1867').
T.: *A. brevispinosus* Oliver (*typ. cons.*).

(H) *Ancistrocarpus* Humboldt, Bonpland et Kunth, Nova Gen. Sp. **2**: ed. fol. 149; ed. qu. 186. Dec 1817 [PHYTOLACC.].
T.: *A. maypurensis* Humboldt, Bonpland et Kunth.

4957. **Sparmannia** Linnaeus f., Suppl. 41, (265, 462, *'Sparrmannia'*) 1781 sem. 2.
T.: *S. africana* Linnaeus f.

(H) *Sparmannia* Buchoz, Pl. Nouvellem. Découv. **3**: *t. 1.* 1779 [SCROPHUL.].
≡ *Rehmannia* Fischer et Meyer 1825 (*nom. cons.*) (7592).

4959. **Luehea** Willdenow, Neue Schr. Ges. Naturf. Fr. Berlin **3**: 410. 1801 ('*Lühea*').
T.: *L. speciosa* Willdenow.

(H) *Luehea* F. W. Schmidt, Neue Selt. Pfl. 23. 1793 ('*Lühea*') [VERBEN.].
T.: *L. ericoides* F. W. Schmidt.

4960. **Mollia** C. F. P. Martius, Nov. Gen. Sp. **1**: 96. 1826 ('1824').
T.: *M. speciosa* C. F. P. Martius.

(H) *Mollia* J. F. Gmelin, Syst. **2**: 303, 420. 1791 [MYRT.].
T.: *M. imbricata* (J. Gaertner) J. F. Gmelin (*Jungia imbricata* J. Gaertner).

Note: Another homonym: *Mollia* Willdenow, Hort. Berol. *t. 11* (1803) [CARYOPH.].

MALVACEAE

4995. **Malvastrum** A. Gray, Mem. Am. Acad. ser. 2. **4**: 21. 1849.
T.: *M. coccineum* (Nuttall) A. Gray (*Malva coccinea* Nuttall).

(=) *Malveopsis* K. B. Presl, Abh. Boehm. Ges. Wiss. ser. 5. **3**: 449. 1845.
T.: *M. anomala* (Link et Otto) K. B. Presl (*Malva anomala* Link et Otto).

5007. **Pavonia** Cavanilles, Diss. **2**: [sub "*Genera elucidanda*" ad finem] 1786; **3**: 132. 1787.
T.: *P. paniculata* Cavanilles.

(=) *Lass* Adanson, Fam. **2**: 400. 1763 prim.
T.: *Hibiscus spinifex* Linnaeus (Syst. Nat. ed. 10. 1149. 1759).
(=) *Malache* B. C. Vogel in Trew, Pl. Sel. Pinx. Ehret 50. 1772.
T.: *M. scabra* B. C. Vogel.

Note: (=) *Prestonia* Scopoli, Intr. 281 (1777), is a superfluous name for *Lass* Adanson (1763), and rejected in favour of *Prestonia* R. Brown (1809) (*nom. cons.*) (6702).

5018. **Thespesia** Solander ex Correa, Ann. Mus. Hist. Nat. Paris **9**: 290. 1807.
T.: *T. populnea* (Linnaeus) Solander ex Correa (*Hibiscus populneus* Linnaeus).

(≡) *Buparitì* Duhamel, Sem. Plant. Add. 5. 1760.

Note: (≡) *Pariti* Adanson, Fam. **2**: 401 (1763) and (≡) *Parita* Scopoli, Intr. 282 (1777) are superfluous names for *Buparitì* Duhamel (1760).

TRIPLOCHITONACEAE

5022a. **Triplochiton** K. Schumann, Bot. Jahrb. **28**: 330. 22 Mai 1900.
T.: *T. scleroxylon* K. Schumann.

(H) *Triplochiton* Alefeld, Oesterr. Bot. Zeitschr. **13**: 13. Jan 1863 [BOMBAC./MALVAC.].

BOMBACACEAE

5035. **Bernoullia** Oliver, Hooker's Ic. Pl. **12**: *t. 1169, 1170.* 1873.
T.: *B. flammea* Oliver.

(H) *Bernullia* Rafinesque, Aut. Bot. 173. 1840 [ROSAC.].

5036. **Cumingia** Vidal, Phan. Cuming. Philip. 211. 1885.
T.: *C. philippinensis* Vidal.

(H?) *Cummingia* D. Don in Sweet, Brit. Fl. Gard. **3**: *t. 257.* 1828 [HAEMADOR.].
T.: *C.campanulata* (Lindley) D. Don (*Conanthera campanulata* Lindley).

Note: The names are of different origin (G. Cumming and H. Cuming) and such names may be treated as homonyms only when there is risk of confusion. This risk seems to be very slight and for this reason conservation was indicated as superfluous (by †) in previous editions of the Code. If this is accepted, *Cummingia* D. Don is available for use.

5040. **Neesia** Blume, Nova Acta Acad. Leop.-Carol. **17** (1): 83. 1835.
T.: *N. altissima* (Blume) Blume (*Esenbeckia altissima* Blume).

(H) *Neesia* C. Sprengel, Anleit. ed. 2. **2** (2): 547. 1818 [COMP.].

Note 1: (≡) *Blumea* H. G. L. Reichenbach, Consp. 209 (1828), is not available because of *Blumia* C. G. Nees ex Blume, Verh. Batav. Genootsch. **9**: 147 (1825) [MAGNOL.], and because of *Blumea* A. P. Decandolle (1833) (*nom. cons.*) (8939).

Note 2: (≡) *Esenbeckia* Blume, Bijdr. 118 (1825 sem. 2) is not available because of *Esenbeckia* Humboldt, Bonpland et Kunth, Nova Gen. Sp. **7**: 246 (Mai 1825).

STERCULIACEAE (incl. BYTTNERIACEAE)

5053. **Dombeya** Cavanilles, Diss. **2**: [sub "*Genera elucidanda*" ad finem] 1786; **3**: 121. 1787.
T.: *D. palmata* Cavanilles.

(H) *Dombeya* L'Héritier, Stirp. Nov. 33. Apr 1786 ('1784') [BIGNON.].
T.: *D. lappacea* L. Héritier.
≡ *Tourettia* Fougeroux 1787 corr. Schreber 1791 (*nom. cons.*) (7766).

(=) *Assonia* Cavanilles, Diss. **2**: [sub "*Genera elucidanda*" ad finem] 1786; **3**: 120. 1787.
T.: *A. populnea* Cavanilles.

Note: Another homonym: *Dombeya* Lamarck, Enc. **2**: 301 (Oct 1786).

5060. **Rulingia** R. Brown, Bot. Mag. *t. 2191.* 1820.
T.: *R. pannosa* R. Brown.

(H) *Ruelingia* Ehrhart, Beitr. **3**: 132. 1788 [PORTUL.].
≡ *Anacampseros* Wernischek 1763 (vide 2412).

5062. **Byttneria** Loefling, Iter Hisp. 313. 1758 sero.
T.: *B. scabra* Linnaeus (Syst. Nat. ed. 10. 939. 1759).

(H) *Buttneria* Duhamel, Traité Arb. Arbust. **1**: 113. 1755 [CALYC.].

Note 1: Another homonym: *Buttneria* P. Browne, Hist. Jamaica 166, 490 (1756).

Note 2: There are many orthographic variants of this name, but in the conservation the original spelling is retained.

5075. **Seringia** J. Gay, Mém. Mus. Hist. Nat. Paris **7**: 442. 1821.
T.: *S. platyphylla* J. Gay, nom. illeg. [*Lasiopetalum arborescens* W. Aiton, *S. arborescens* (W. Aiton) Druce].

(H) *Seringia* C. Sprengel, Anleit. ed. 2. **2** (2): 694. 1818 [CELASTR.].
≡ *Ptelidium* Thouars 1805.

5080. **Pterospermum** Schreber, Gen. **2**: 461. 1791.
T.: *P. suberifolium* (Linnaeus) Willdenow (Sp. Pl. **3**: 728. 1800) (*Pentapetes suberifolia* Linnaeus).

(≡) *Velaga* Adanson, Fam. **2**: 398. 1763 prim.

5091. **Cola** Schott et Endlicher, Melet. Bot. 33. 1832.
T.: *C. acuminata* (Beauvois) Schott et Endlicher (*Sterculia acuminata* Beauvois) (*typ. cons.*).

(=) *Bichea* Stokes, Mat. Med. **2**: 564. 1812.
T.: *B. solitaria* Stokes.

Note: (=) *Edwardia* Rafinesque, Specchio **1**: 158 (1814), and (=) *Lunanea* A. P. Decandolle, Prodr. **2**: 92 (1825), are superfluous names for (=)*Bichea* Stokes (1812).

OCHNACEAE

†5113. **Ouratea** Aublet, Pl. Guiane 397. 1795.
T.: *O. guianensis* Aublet.

Note: Conservation superfluous: *Jabotapita* Adanson, Fam. **2**: 364 (1763), is an illegitimate substitute name for *Ochna* Linnaeus, Sp. Pl. 518 (1753), and cannot be regarded as a synonym of *Ouratea* Aublet. *Ochna* Linnaeus is now usually typified by *O. squarrosa* Linnaeus (1762) (see M. L. Green, Prop. Brit. Bot. 161. 1929), the only element of the original species *Ochna jabotapita* Linnaeus now retained in the genus *Ochna*. Adanson made no distinction and simply substituted *Jabotapita* for *Ochna* Linnaeus (1753).

5144. **Bonnetia** C. F. P. Martius, Nova Gen. Sp. **1**: 114. 1826 ('1824').
T.: *B. anceps* C. F. P. Martius (*typ. cons.*).

(H) *Bonnetia* Schreber, Gen. **1**: 373. 1789 sem. 1 [THEAC.].
≡ *Mahurea* Aublet 1775.
(=) *Kieseria* C. G. Nees in Wied-Neuwied, Reise Bras. **2**: 338. 1821.
T.: *K. stricta* C. G. Nees.

5148. **Gordonia** Ellis, Philos. Trans. Roy. Soc. **60**: 518, 520. 1771.
T.: *G. lasianthus* (Linnaeus) Ellis (*Hypericum lasianthus* Linnaeus).

(≡) *Lasianthus* Adanson, Fam. **2**: 398. 1763. nom. rej. vs. *Lasianthus* W. Jack 1823 (*nom. cons.*) (8412).

Note: Gordonia J. Ellis was superfluous on publication, hence the conservation is still necessary notwithstanding the conservation of *Lasianthus* W. Jack.

†5149. **Laplacea** Humboldt, Bonpland et Kunth, Nova Gen. Sp. **5**: ed. fol. 161; ed. qu. 207. Feb 1822.
T.: *L. speciosa* Humboldt, Bonpland et Kunth.

Note: Conservation now superfluous: (=)*Haemocharis* R. A. Salisbury, Parad. Lond. **1**: sub *t. 56* (1806) is a *nomen nudum,* the first valid publication being by C. F. P. Martius in 1826; (=) *Lindleya* C. G. Nees, Flora **1**: 299 (1821), is not available because of *Lindleya* Humboldt, Bonpland et Kunth (1824) (*nom. cons.,* 3328); and (=) *Wikstroemia* Schrader, Gött. Gelehrte Anz. 710 (5 Mai 1821) is not available because of *Wickstroemia* Endlicher (1833) (*nom. cons.,* 5446); (=) *Haemocharis* Martius, Nov. Gen. Pl. **1**: 106 (1826) was superfluous on publication (the then legitimate *Wikstroemia* Schrader was cited) and hence illegitimate.

5153. **Ternstroemia** Mutis ex Linnaeus f., Suppl. 39, 264. 1781 sem. 2.
T.: *T. meridionalis* Mutis ex Linnaeus f.

(=) *Mokof* Adanson, Fam. **2**: 501. 1763 prim.
(=) *Taonabo* Aublet, Pl. Guiane 569. 1775.

Note: (=) *Hoferia* Scopoli, Intr. 194 (1777), is a superfluous name for (=) *Mokof* Adanson (1763); (=) *Dupinia* Scopoli, Intr. 195 (1777), is the same for (=) *Taonabo* Aublet (1775).

5155. **Anneslea** Wallich, Pl. Asiat. Rar. **1**: 5. Sep 1829.
T.: *A. fragrans* Wallich.

(H) *Anneslia* R. A. Salisbury, Parad. Lond. *t. 64.* 1807 [LEGUM.] (etiam vide 3444).
T.: *A. falcifolia* R. A. Salisbury.

Note 1: Another homonym: *Anneslea* Roxburgh ex Andrews, Bot. Repos. **10**: *t. 618* (1811) [NYMPHAEAC.].

Note 2: (≡) *Callosmia* C. Presl, Abh. Boehm. Ges. Wiss. ser. 5. **3**: 533 (1845), (≡) *Daydonia* Britten, Journ. Bot. **26**: 11 (1888), and (≡) *Mountnorrisia* Szyszlowicz, in Engler et Prantl, Nat. Pflanzenf. **3**(6): 189 (1893), are all substitute names for *Anneslea* Wallich (1829), of which only the first was legitimate on publication.

5157a. **Cleyera** Thunberg, Nova Gen. Pl. 68. 18 Jun 1783.
T.: *C. japonica* Thunberg.

(H) *Cleyera* Adanson, Fam. **2**: 224. 1763 prim. [LOGAN.].
≡ *Polypremum* Linnaeus 1753.

5157b. **Freziera** Willdenow, Sp. Pl. **2**: 1179. 1799 (vel Jan 1800).
T.: *F. undulata* (Swartz) Willdenow (*Eroteum undulatum* Swartz) (*typ. cons.*).

(≡) *Eroteum* Swartz, Prodr. 5, 85. Jun-Jul 1788.
(=) *Lettsomia* Ruiz et Pavon, Prodr. 77. 1794.

GUTTIFERAE (CLUSIACEAE, incl. HYPERICACEAE)

5171. **Vismia** Vandelli, Fl. Lusit. Bras. 51. 1788.
T.: *V. cayennensis* (N. J. Jacquin) Persoon (Syn. Pl. **2**: 86. 1806) (*Hypericum cayennense* N. J. Jacquin) (*typ. cons.*).
(=) *Caopia* Adanson, Fam. **2**: 448. 1763 prim.

Note: (=) *Caspia* Scopoli, Intr. 276 (1777), is a superfluous name for *Caopia* Adanson (1763).

5195. **Balboa** Planchon et Triana, Ann. Sci. Nat. Bot. ser. 4. **13**: 315. 1860 sem. 1; **14**: 252. 1860 sem. 2.
T.: *B. membranacea* Planchon et Triana.
(H) *Balboa* Liebmann ex Didrichsen, Vid. Medd. Nat. For. Kjøbenh. **1853**: 106. 1853 [LEGUM.].
T.: *B. diversifolia* Liebmann.

5205. **Platonia** C. F. P. Martius, Nova Gen. Sp. **3**: 168. 1832 ('1829').
T.: *P. insignis* C. F. P. Martius, nom. illeg. [*Moronobea esculenta* Arruda da Camara in Koster, Travels 490 (1816), *P. esculenta* (Arruda da Camara) Rickett et Stafleu, **comb. nov.**].
(H) *Platonia* Rafinesque, Carat. Nov. Gen. Sp. Sicil. 73. 1810 [CIST.].
≡ *Helianthemum* P. Miller 1754.

Note 1: Another homonym: *Platonia* Kunth, Disp. Meth. Gram. **1**: 139, 327 (1829) [GRAM.].

Note 2: The name *Platonia insignis* C. F. P. Martius is illegitimate because of the citation of *Moronobea esculenta* Arruda da Camara (validly published in Koster, Travels 490. 1816). We do not know whether this is the same as Martius' plant and the choice of the type may have to be reconsidered.

DIPTEROCARPACEAE

5221. **Pierrea** F. Heim, Bull. Soc. Linn. Paris **1891**: 958. 1891.
T.: *P. pachycarpa* F. Heim.
(H) *Pierrea* Hance, Journ. Bot. **15**: 339. Nov 1877 [FLACOURT.].
T.: *P. dictyoneura* Hance.

COCHLOSPERMACEAE

†5250. **Cochlospermum** Kunth ex A. P. Decandolle, Prodr. **1**: 527. Jan 1824.
T.: *C. gossypium* (Linnaeus) A. P. Decandolle (*Bombax gossypium* Linnaeus).

Note 1: Conservation superfluous: (=) *Maximilianea* Martius in Schrank, Flora **2**: 452 (1829), is no longer available because of the conservation of (660) *Maximiliana* Martius 1826 [PALMAE].

Note 2: The publication of *Cochlospermum* by Kunth in his Malvac. (6. 12 Mai 1822) is not valid (no description).

CANELLACEAE

†5254. **Canella** P. Browne, Hist. Jamaica 275. 1756.
T.: *C. winterana* (Linnaeus) J. Gaertner (Fruct. **1**: 373. 1788) (*Laurus winterana* Linnaeus).

Note: Conservation superfluous: the 1756 publication is valid.

†5259. **Amphirrhox** C. Sprengel, Syst. **4** Cur. Post.: 51, 99. 1827 sem. 1.
T.: *A. longifolia* (A. Saint-Hilaire) C. Sprengel (*Spathularia longifolia* A. Saint-Hilaire).

Note: Conservation superfluous: (≡) *Spathularia* A. Saint-Hilaire, Mém. Mus. Hist. Nat. Paris **11**: 51, 491 (1824), is illegitimate because of *Spathularia* Persoon ex E. M. Fries, Syst. Mycol. **1**: 490 (1821). The name (=) *Braddleya* Vellozo, Fl. Flum. 93 (1825) (T.: *B. legalis* Vellozo), is cited in the Code (Art. 75) as an example of an inadmissible later orthographic variant of *Bradlea* Adanson (1763) [LEGUM.]. There is therefore no competing name.

†5271. **Hybanthus** N. J. Jacquin, Enum. Pl. Carib. 2. 17. Mai 1760.
T.: *H. havanensis* N. J. Jacquin.

Note: Conservation superfluous: *Calceolaria* Loefling, Iter Hisp. 183 (1758), was not validly published (no description).

FLACOURTIACEAE

5304. **Scolopia** Schreber, Gen. **1**: 335. 1789 sem. 1.
T.: *S. pusilla* (J. Gaertner) Willdenow (Sp. Pl. **2**: 981. 1799 vel Jan 1800) (*Limonia pusilla* J. Gaertner).
(=) *Aembilla* Adanson, Fam. **2**: 448. 1763 prim.

5311. **Byrsanthus** Guillemin in Delessert, Ic. **3**: 30. *t.* 52. 1837.
T.: *B. brownii* Guillemin.
(H) *Byrsanthes* K. B. Presl, Prodr. Monogr. Lobel. 41. 1836 trim. 3. [CAMPAN.].
T.: *B. humboldtiana* K. B. Presl, nom. illeg. (*Lobelia nivea* Willdenow).

Note: Marked as a superfluous conservation in ICBN 1952 and 1956 because *Byrsanthus* and *Byrsanthes* can be regarded as different names. Since there is some risk of confusion we propose to treat the conservation as necessary.

(to be continued)

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Nigeria

Forest Research, Ibadan (1952).

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Hopkins, B., B.Sc., Ph.D., Dept. of Botany, University College, Ibadan (1956).
Keay, R. W. J., M.A., F.L.S., Federal Department of Forest Research, Ibadan (1952).

Norway

Universitetets Botaniske Museum, Trondheimsveien 23a, *Oslo* 45 (1951).

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Berg, R. Y., Botanisk Museum, Oslo (1956).
Eckblad, F. E., University Botanical Garden, Trondheimsveien 23b, Oslo (1957).
Faegri, Prof. K., Botanisk Museum, Bergen (1951).
Gjaerevoll, O., Dept. of Botany, Museum of the Royal Norwegian Society for Science and Letters, Trondheim (1951).
Hagen, A., Løvenskioldsgt. 4, Oslo (1951).
Hoeg, Prof. O. A., Universitetets farmasoitiske Institut, Oslo-Blindern (1953).
Lid, J., Botanisk Museum, Oslo 45 (1951).
Rønning, Dr O. I., Tromsø Museum, Tromsø (1953).
Thorsrud, Dr A., Institut for Blomsterdyrkning, Vollebekk (1957).
Wendelbo, P., Botanisk Museum, Bergen (1956).

Pakistan

Ali, Dr S. I., 2D, 14/3, Nazimabad, Karachi (1957).
Hossain, Dr M., c/o The Department of Botany, Dacca University, Dacca (1959).

Peru

Museo de Historia Natural "Javier Prado", Avenida Arenales 1256, Lima (1951).

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Sonkup, J., L. Prado 520, Magdalena del Mar (1955).

Philippines

Mendoza, D. R., Director, National Museum, Manila (1959).
Pancho, J. V., Department of Agricultural Botany, Central Experiment Station, University of the Philippines College, Laguna (1959).
Quisumbing, Dr E., National Museum, Herran & Taft Avenue Sts., Manila (1951).
Santos, Dr J. V., Dept. of Botany, College of Liberal Arts, University of the Philippines, Quezon City (1952).
Steiner, Dr M. L., 419 Park Avenue, Pasay (1953).
Velasquez, G. T., Dept. of Botany, University of the Philippines, Diliman, Rizal (1957).

Poland

Institutum Botanicum, Academiae Scientiarum Polonae, Lubicz 46, *Kraków* (1957).

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Pawlowski, Prof. B., Lobrowska 59, Kraków (1957).

Portugal

Jardim e Museu Agricola do Ultramar, Calçada do Galvão, *Belém-Lisboa* (1952).
Museu Botânico de Lisboa, Faculdade de Ciencias, *Lisboa* (1952).

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Amaral Franco, Prof. J. M. A. P. do, 82 Rua Presidente Arriaga, Lisboa (1951).
Carvalho e Vasconcellos, Prof. J. de, Instituto Superior de Agronômia, Lisboa (1951).
Fernandes, Prof. A., Instituto Botânico da Universidade de Coimbra, Coimbra (1951).
Malato Beliz, J., Laboratório de Botânica, Estação de Melhoramento de Plantas, Elvas (1951).
Pinto da Silva, A. R., Estação Agronômica Nacional, Sacavem (1951).
Tavares, Dr C. N., Instituto Botânico, Faculdade de Ciencias, Lisboa (1951).

El Salvador

Instituto Tropical de Investigaciones Cientificas, Ap. Postal 740, *San Salvador* (1956).

Singapore

Dept. of Botany, University of Malaya, Cluny Road, *Singapore 10* (1951).
Botanic Gardens, Singapore 10 (1957).

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Furtado, C. X., Botanic Gardens, Singapore 10 (1956).
Sinclair, J., Botanic Gardens, Singapore 10 (1956).

S. Rhodesia

Federal Herbarium, Branch of Botany and Plant Pathology, Federal Ministry of Agriculture, P.O. Box 8100, Causeway, *Salisbury* (1959).

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Boughey, Prof. A. S., Private Bag 167 H, Salisbury (1956).
Greatrex, F. C., 8 Queen's Gate Hats, Baines Avenue & Fifth Street, Causeway, Salisbury (1955).
Roan, H. M., P.O. Box 287, Bulawayo (1959).
Wild, Dr H., Branch of Botany and Plant Pathology, Federal Ministry of Agriculture, P.O. Box 8100, Causeway, Salisbury (1952).

Spain

Instituto Antonio José Cavanilles, Plaza Murillo 2, *Madrid* (1953).

Instituto Forestal de Investigaciones y Experiencias, Apartado de Correos 8.111, *Madrid* (1956).

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Bellot, F., Catedratico de Botánica, Universidad de Santiago de Compostela, Santiago de Compostela (1951).

Bolós, Prof. A. de, Instituto Botánico de Barcelona, Parque de Montjuic, Barcelona (1951).

Fernandez Galiano, Prof. D., Av. de los Toreros, 67, 2°-izq., Madrid (1958).

Guinea, Prof. E., Ayala 73, Madrid (1951).

Lainz, Dr M., Universidad Laboral, Gijón (1953).

Menéndez Amor, Miss J., Instituto José de Acosta, Museo Nacional de Ciencias Naturales, Laboratorio de Palinologia, P.° de la Castellana 84, Madrid (1957).

Panella Bonastre, J., Constitucion 155, Barcelona (1958).

Paunero, Dr E., Jardin Botánico, Plaza Murillo 2, Madrid (1951).

Riviere de Caralt, F., 58 Ronda San Pedro, Barcelona (1958).

Sudan

Beshir, B., Gezira Research Farm, Wad Medani (1957).

MacLeay, Dr K. N. G., Gordon Memorial College, P.O. Box 321, Khartoum (1953).

Sweden

Botaniska Trädgården, Göteborg (1951).

Botaniska Museet, Lund (1951).

Botaniska Avd., Naturhistoriska Riksmuseum, Stockholm 50 (1955).

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Ahler, Dr S., Botaniska Avd., Naturhistoriska Riksmuseum, Stockholm 50 (1951).

Almborn, Dr O., Botaniska Museet, Lund (1951).

Almestrand, Dr A., Gladstonevägen 5, Lund (1957).

Andersson, O., Botaniska Avd., Naturhistoriska Riksmuseum, Stockholm 50 (1952).

Asplund, Dr E., Botaniska Avd., Naturhistoriska Riksmuseum, Stockholm 50 (1952).

Dahlgren, R., Botaniska Museet, Lund (1956).

Degelius, Dr G., Botaniska Trärgården, Göteborg C. (1952).

Du Rietz, Prof. G. E., Växtbiologiska Institutionen, Uppsala 8 (1954).

Erdtman, Prof. G., Palynological Laboratory, Nybodagatan 5, Stockholm-Solna (1951).

Florin, Prof. R., Bergianska Trädgården, Stockholm 50 (PB) (1951).

Fries, Prof. R. E., Floragatan 3, Stockholm (1951).

Harling, Dr G., Bergianska Trädgården, Stockholm 50 (1952).

Hässler, A., Ö. Vallgatan 39, Lund (1951).

Hedberg, Dr K. O., Botaniska Museet, Uppsala 1 (1952).

Hjelmqvist, Dr H., Botaniska Museet, Lund (1951).

Holm, L., Botaniska Museet, Uppsala 1 (1951).

Horn af Rantzien, H., Botaniska Avd., Naturhistoriska Riksmuseum, Stockholm 50 (1951).

Hylander, N., Botaniska Museet, Uppsala 1 (1951).

Larsson, B. M. P., Institute of Plant Ecology, University of Uppsala, Villavägen 14, Uppsala (1959).

Lundblad, Miss B., Palaeobotaniska Avd., Naturhistoriska Riksmuseum, Stockholm 50 (PB) (1951).

Mårtensson, Dr O., Trädgårdsgatan 10, Uppsala (1959).

Mattisson, K. H., S. Kronoborgsvägen 10A, Malmö (1951).

Nannfeldt, Prof. J. A., Botaniska Museet, Uppsala 1 (1951).

Norlindh, Dr T., Botaniska Museet, Lund (1951).

Peterson, B. H., Botaniska Museet, Lund (1951).

Pettersson, B., Adelsgatan 2, Visby (1951).

Runemark, Dr H., Botaniska Museet, Lund (1952).

Santesson, Dr R., Botaniska Museet, Uppsala (1951).

Segelberg, Prof. I., Stenungsundsgatan 20, Göteborg (1958).

Selling, Prof. O. H., Palaeobotaniska Avd., Naturhistoriska Riksmuseum, Stockholm 50 (PB) (1955).

Skottsberg, Prof. C., Apotekaregatan 8, Göteborg (1951).

Weimarck, Prof. H., Botaniska Museet, Lund (1951).

Switzerland

Institut et Jardin botaniques de l'Université, Altenbergrain 21, *Bern* (1951).

Nomenklaturkommission des Schweizerischen Gartenbaues, Münsingen - Bern (1953).

Conservatoire botanique de la Ville de Genève, 192 Route de Lausanne, *Genève* (1951).

Musée de Botanique, Palais de Rumine, *Lausanne* (1951).

Botanischer Garten und Bot. Museum der Universität Zürich, Pelikanstrasse 40, *Zürich* (1952).

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Aellen, P., Mittlere Strasse 139, Basel (1951).
Baehni, Prof. Ch., Conservatoire Botanique, 192 Route de Lausanne, Genève (1951).
Buchmann-Felber, H. E., Sunnehalde, Feldmeilen (1958).
Daepp, H. P., Münsingen - Bern (1951).
Eichenberger, Dr E., Dorstrasse 194, Meilen (1958).
Fuchs, Dr H. P., Botanisches Institut der Universität, Basel (1954).
Geiger-Huber, Prof. M., Botanisches Institut der Universität, Basel (1952).
Huber-Morath, Dr A., Salinenstrasse 17, Basel (1952).
Huysman, H. S. C., 23, Rue de Pommeret, Cernier (Ne.) (1957).
Krainz, H., Mythenquai 88, Zürich 2 (1958).
Markgraf, Prof. Dr F., Botanischer Garten und Botanisches Museum der Universität Zürich, Pelikanstrasse 40, Zürich (1951).
Maurizio, Dr A., Eidg. Versuchsanstalt, Bienenabteilung, Liebefeld/Bern (1951).
Moll, H. G., Gartendörfli, Gotenbach, Sihltal-Zürich (1958).

Thailand

Botanical Section, Department of Agriculture, Bangkok (1953).

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Suvarnasuddhi, K., Forest Products Research Division, Royal Forest Dept., Bangkok (1951).

Tunisia

Pottier-Alapetite, Mme, Institute des Hautes Etudes, 8 Rue de Rome, Tunis (1958).

Turkey

Demiriz, Dr H., Universitat Istanbul, Institut für Pharmazeutische Botanik und Genetik, Süleymaniye, Istanbul (1956).

Uganda

Lind, Dr E. M., Makerere College, The University College of East Africa, P.O. Box 262, Kampala (1959).

Union of South Africa

The Bolus Herbarium, University of Cape Town, Rondebosch, Cape Town (1952).
The Moss Herbarium, Dept. of Botany, University of the Witwatersrand, Johannesburg (1952).
National Botanic Gardens, Kirstenbosch, Newlands, C.P. (1958).
The Bews Botanical Laboratory, University of Natal, P.O. Box 375, *Pietermaritzburg* (1953).
Division of Botany and Plant Pathology, National Herbarium, P.O. Box 994, *Pretoria* (1951).
Departement van Plantkunde, Universiteit van Stellenbosch, Stellenbosch (1953).

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Adamson, Prof. R. S., Morton, Lochiel Road, Rondebosch (temporarily c/o Dept. of Botany, British Museum (Natural History), London, S.W. 7 - Great Britain) (1951).
Dyer, Dr R. A., P.O. Box 994, Pretoria (1954).
Killick, D. J. B., Department of Botany, P.O. Box 994, Pretoria (1954).
Levyns, Mrs M. R., Dept. of Botany, University of Cape Town, Rondebosch (1951).
Pocock, Dr M. A., 18 Milner Street, Grahamstown, C.P. (1954).
Reynolds, Dr G. W., P.O. Box 2097, Johannesburg (1955).
Weintroub, D., Transvaal Chamber of Mines, P.O. Box 809, Johannesburg (1952).

United States

University of New Mexico Library, Albuquerque, N. Mex. (1955).
The Herbarium, Dept. of Botany, Iowa State College, *Ames*, Iowa (1952).
University of Georgia Libraries, Acquisitions Division, Athens, Ga. (1958).
The University of Texas Library, Austin 12, Tex. (1955).
Louisiana State University, Library, Serials Division, *Baton Rouge 3*, La. (1952).
Indiana University, College of Arts and Sciences, Department of Botany, *Bloomington*, Ind. (1953).
Brooklyn Botanic Garden, 1000 Washington Avenue, *Brooklyn 25*, N.Y. (1952).
Gray Herbarium, Harvard University, 22 Divinity Avenue, *Cambridge 38*, Mass. (1952).
Farlow Herbarium and Library, 20 Divinity Avenue, *Cambridge 38*, Mass. (1957).
Serials Department, University of North Carolina Library, Chapel Hill, N.C. (1956).
Chicago Natural History Museum, Roosevelt Road and Lake Shore Drive, *Chicago 5*, Ill. (1952).
Rancho Santa Ana Botanic Garden, 1500 North College Ave., *Claremont*, Cal. (1951).
Dept. of Botany, Rm. 102 B & Z. Bldg., *Ohio State University, Columbus 10*, Ohio (1957).
Herbarium of Southern Methodist University, Dallas 5, Tex. (1951).

Michigan State University, Dept. of Botany and Plant Pathology, *East Lansing,* Mich. (1952).

Dept. of Biology, Kansas State Teachers College, Emporia, Kan. (1957).

University of Hawaii Library, Honolulu 14, Hawaii (1952).

Shell Development Company, 3737 Bellaire Blvd., *Houston 25,* Tex. (1958).

State University of Iowa, Dept. of Botany, *Iowa City,* Iowa (1951).

Bailey Hortorium, Sage Place, *Ithaca,* N.Y. (1951).

Longwood Gardens, Education Department, Kennett Square, Pa. (1957).

Traub Herbarium, American Plant Life Society, *La Jolla,* Cal. (1955).

Kansas State University Library, Manhattan, Kan. (1959).

New York Botanical Garden, Bronx Park, *New York 58,* N.Y. (1951).

Texas Research Foundation, P.O. Box 43, *Renner,* Tex. (1952).

The Herbarium, Dept. of Biology, The University of Nevada, *Reno,* Nev. (1956).

The Library, University of California, Riverside, Cal. (1958).

California Academy of Sciences Library, Golden Gate Park, *San Francisco 18,* Cal. (1951).

Missouri Botanical Garden, 2315 Tower Grove Avenue, *St Louis 10,* Mo. (1955).

Jersey Production Research Company, 1133 North Lewis Avenue, *Tulsa 10,* Okla. (1959).

Dept. of Botany, U.S. National Museum, Smithsonian Institution, *Washington,* D.C. (1955).

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Aaron, I. M., 602 Sunset Drive, Butler, Pa. (1955).

Abbott, M. Langford, Dept. Biological Sciences, University of Cincinnati, Cincinnati 21, Ohio (1958).

Adams, W. P., Division of Botany, Florida State University, Tallahassee, Fla. (1957).

Ahmadjian, Prof. V., Department of Biology, Clark University, Worcester, Mass. (1959).

Allen, Dr C. K., The New York Botanical Garden, Bronx Park, New York 58, N.Y. (1951).

Allen, Dr O. N., 212-A Bacteriology Bldg., University of Wisconsin, Madison 6, Wisc. (1951).

Almodovar, L. R., Institute of Marine Biology, University of Puerto Rico, Mayaguez, Puerto Rico (1958).

Anderson, Dr D. E., Botany Dept., Iowa State University, Ames, Iowa (1959).

Anderson, Dr E., Missouri Botanical Garden, 2315 Tower Grove, St Louis 10, Mo. (1952).

Anderson, J. M. F., Jr., 612 Asp, Apt. 4, Norman, Okla. (1951).

Anderson, L. E., Dept. of Botany, Duke University, Durham, N.C. (1957).

Andrews, Dr H. N., Botany School, Washington University, St Louis 5, Mo. (PB) (1955).

Archer, Dr W. A., 4317 Rowalt Drive, College Park, Md. (1952).

Argus, G. W., Gray Herbarium, 22 Divinity Avenue, Cambridge 38, Mass. (1959).

Arnold, Dr Ch. A., Division of Botany, University of Michigan, Ann Arbor, Mich. (1955).

Axelrod, Dr D. I., Dept. of Geology, University of California, Los Angeles 24, Cal. (PB) (1955).

Bache-Wiig, Dr S., Dept. of Botany, Burton Hall, Smith College, Northampton, Mass. (1952).

Bacigalupi, Dr R., Jepson Herbarium, Dept. of Botany, University of California, Berkeley 4, Cal. (1951).

Baker, G. R., Dept. of Botany, University of Washington, Seattle 5, Wash. (1958).

Baker, Dr W. H., Dept. of Biol. Sci., University of Idaho, Moscow, Idaho (1952).

Baldwin, Dr J. T., Jr., Box 1588, Williamsburg, Va. (1952).

Banks, Prof. H. P., Dept. of Botany, Cornell University, Ithaca, N.Y. (PB) (1955).

Barghoorn, Prof. E. S., Harvard University, Biological Laboratories, Cambridge 38, Mass. (PB) (1955).

Barkley, F. A., 34 Elm Street, Morristown, N.Y. (1959).

Barneby, R. C., Wappingers Falls, N.Y. (1951).

Baxter, R. W., Dept. of Botany, University of Kansas, Lawrence, Kansas (PB) (1955).

Beal, E. O., Dept. of Botany, North Carolina State College, Raleigh, N.C. (1958).

Beaman, Dr J. H., Dept. of Botany & Plant Pathology, Michigan State University, East Lansing, Mich. (1953).

Beard, Dr H., Dept. of Botany, University of California, Berkeley 4, Cal. (1952).

Bell, C. R., Dept. of Botany, University of North Carolina, Chapel Hill, N.C. (1956).

Benjamin, C. R., Culture Collection Unit Fermentation Section, Northern Utilization Research & Development Division, U.S.D.A., Peoria, Ill. (1958).

Benninghoff, W. S., University of Michigan, Dept. of Botany, Ann Arbor, Mich. (PB) (1958).

Benson, Prof. L., Dept. of Botany, Pomona College, Claremont, Cal. (1951).

Berry, Dr E. W., College Station, Durham, N.C. (PB) (1955).

Beyer, Dr A. F., Midwestern University, Box 1, Wichita Falls, Texas (PB) (1955).

Bigelow, Mrs H. E., Dept. of Botany, University of Massachusetts, Amherst, Mass. (1956).

Birdsey, Dr M. R., Dept. of Botany, University of Miami, Coral Gables 46, Fla. (1955).

Blake, Dr S. F., Plant Industry Station, Beltsville, Md. (1951).

Blakley, E. R., Santa Barbara Botanic Garden, Santa Barbara, Cal. (1951).

Blasdell, R. F., Division of Sciences, Louisiana State University in New Orleans, Lake Front, New Orleans 22, La. (1956).

Bodman, Sister M. C., 1020 West Sheridan Road, Mundelein College, Chicago 40, Ill. (1951).

Booth, Prof. W. E., Dept. of Botany and Bacteriology, Montana State College, Bozeman, Mont. (1951).

Bowerman, Miss M. L., University of California Herbarium, Berkeley 4, Cal. (1952).

Breen, R. S., 1806 Croydon Drive, Tallahassee, Fla. (1959).

Breitung, A. J., 1416 So. Glendale Ave., Apt. 6, Glendale 5, Cal. (1957).

Brown, Dr C. A., 1180 Stanford Avenue, Baton Rouge 15, La. (1951).

Brown, Dr D. F. M., Dept. of Biology, Eastern Michigan College, Ypsalanti, Mich. (1954).

Brown, J. R., 132 W. Union Street, Pasadena 1, Cal. (1959).

Brown, R. M., Crater Lake National Park, Fort Klamath Rural Station, Klamath Falls, Ore. (1958).

Bryan, Dr E. H., Jr., Bernice P. Bishop Museum, Honolulu 17, Hawaii (1951).

Buchanan, R. E., Iowa State College, Room 316, Curtiss Hall, Ames, Iowa (1951).

Camp, Dr W. H., Dept. of Botany, University of Connecticut, Storrs, Conn. (1951).

Canright, Dr J. E., Dept. of Botany, Indiana University, Bloomington, Ind. (PB) (1955).

Chambers, Dr K. L., Osborn Botanical Laboratory, Yale University, New Haven, Conn. (1954).

Channell, Dr R. B., Dept. of Biology, Vanderbilt University, Nashville 5, Tenn. (1954).

Charette, L. A., 27 Ferguson Avenue, Burlington, Vt. (1953).

Chase, Mrs A., United States National Museum, Smithsonian Institution, Washington 25, D.C. (1952).

Chi Ling Chen, Yale University, Medical School, New Haven, Conn. (1957).

Clark, R. B., Rutgers University, New Brunswick, N.J. (1951).

Clausen, Dr R. T., Dept. of Botany, Cornell University, Ithaca, N.Y. (1951).

Clayton, T., 3700 White Bear Ave., White Bear 10, Minn. (1954).

Clevenger, Dr S., Biology Department, Wittenberg University, Springfield, Ohio (1959).

Cobb, B., 25 East End Avenue, New York, N.Y. (1954).

Cohn, J., 223 Pinehurst Road, Wilmington 3, Delaware (1953).

Collins, Dr D. C., Suite n. 503, 7046 Hollywood Boulevard, Hollywood 28, Cal. (1951).

Collins, Dr H. R., Ohio Division of Geological Surveys, 155 South Oval Dr., Columbus 10, Ohio (PB) (1959).

Conklin, Prof. H. C., Columbia University in the City of New York, Dept. of Anthropology, New York 27, N.Y. (1958).

Conrade Head, Dr S., Pan American Petroleum Corporation, Research Center, P.O. Box 591, Tulsa, Okla. (1957).

Constance, Dr L., Herbarium of the University of California, Berkeley 4, Cal. (1953).

Cooke, W. M. Bridge, 1135 Wilshire Avenue, Cincinnati 30, Ohio (1951).

Cooley, G. R., Ghinsegut Hill, Rt. 2, Box 216, Brooksville, Fla. (1956).

Cooperrider, T. S., Dept. of Biology, Kent State University, Kent, Ohio (1958).

Core, Dr E. L., Dept. of Biology, West Virginia University, Morgantown, W.Va. (1955).

Correll, Dr D. S., Texas Research Foundation, Renner, Tex. (1951).

Couch, J. N., University of North Carolina, Chapel Hill, N.C. (1959).

Cowan, Dr R. S., Dept. of Botany, U.S. National Museum, Smithsonian Institution, Washington 25, D.C. (1951).

Cridland, A. A., Dept. of Botany, Kansas University, Lawrence, Kans. (PB) (1958).

Cronquist, Dr A., New York Botanical Garden, Bronx Park, New York 58, N.Y. (1954).

Cross, Dr A. T., Pan American Petroleum Corp., Research Center, P.O. Box 591, Tulsa 2, Okla. (PB) (1955).

Cuatrecasas, Dr J., U.S. National Museum, Smithsonian Institution, Washington 25, D.C. (1951).

Culberson, W. L., Dept. of Botany, Duke University, Durham, N.C. (1952).

Cull, Miss Irene, 200 Dixon Avenue, Peoria, Ill. (1951).

Dahl, Prof. A. Orville, Dept. of Botany, University of Minnesota, Minneapolis 14, Minn. (1952).

Daily, W. A., Dept. of Botany, Butler University, Indianapolis 7, Ind. (1956).

Daoud, H. S., Dept. of Botany, Duke University, Durham, N.C. (1958).

Davidson, R. A., 203 East Locust Street, Davenport, Iowa (1957).

Degener, Dr O., Waialua, Oahu, Hawaii (1959).

Delevoryas, Th., Dept. of Plant Science, Yale University, New Haven, Conn. (PB) (1955).

Denison, Dr W. C., Dept. of Botany, University of North Carolina, Chapel Hill, N.C. (1956).

DePoe, C. E., Dept. of Botany, North Carolina State College, Raleigh, N.C. (1959).

Derrick, Dr G. E., Central State College, Edmond, Okla. (1953).

Diehl, Dr W. W., 1512 N. McKinley Road, Arlington 5, Va. (1951).

Dodge, Dr C. W., Henry Shaw School of Botany, Washington University, St Louis 5, Mo. (1951).

Dorf, Prof. E., Dept. of Geology, Princeton University, Princeton, N.J. (PB) (1955).

Dress, Dr W. J., Bailey Hortorium, Cornell University, Ithaca, N.Y. (1958).

Dressler, R. L., Missouri Botanical Garden, 2315 Tower Grove Avenue, St Louis 10, Mo. (1953).

Drouet, Dr F., Dept. of Botany, University of Arizona, Tucson, Arizona (1953).

Duman, Rev. Dr M. G., Catholic University of America, Washington 17, D.C. (1951).

Duncan, Dr W. H., Dept. of Botany, University of Georgia, Athens, Ga. (1952).

Dunn, Dr D. B., Dept. of Botany, University of Missouri, Columbia, Mo. (1954).

Earle, Dr W. H., Desert Botanical Garden of Arizona, Tempe, Ariz. (1951).

Easterly, Dr N. W., Dept. of Biology, Bowling Green State University, Bowling Green, Ohio (1959).

Ebinger, J. E., Osborn Botanical Laboratory, Yale University, New Haven, Conn. (1958).

Eggert, D. A., Dept. of Botany, Yale University, New Haven, Conn. (1958).

Ehrle, E. B., State University Teachers College, Geneso, N.Y. (1956).

Elias, M. K., University of Nebraska, Conservation & Supply Division, 108 Nebraska Hall, Lincoln 8, Neb. (PB) (1955).

Erbisch, F. H., 421 Abbott Road, East Lansing, Mich. (1958).

Evans, Dr A. W., Yale University, Osborn Botanical Laboratory, New Haven, Conn. (1952).

Evitt, W. R., Jersey Production Research Company, 1133 North Lewis Avenue, Tulsa 10, Okla. (1958).

Ewan, Prof. J., Tulane University, New Orleans 18, La. (1952).

Faruqi, S. A., Dept. of Botany and Plant Pathology, Oklahoma State University, Stillwater, Okla. (1959).

Fay, M. J., Dept. of Botany, Wisconsin State College, Eau Claire, Wisc. (1952).

Felix, C. J., Sun Oil Company, 503 N. Central Expressway, Richardson, Texas (PB) (1959).

Ferris, Mrs R. S., Dudley Herbarium, Natural History Museum, Stanford University, Stanford, Cal. (1951).

Fisher, Dr T. R., Botany Dept., Ohio State University, Columbus 10, Ohio (1959).

Flowers, Prof. S., Dept. of Botany, University of Utah, Salt Lake City 1, Utah (1952).

Fosberg, Dr F. R., 212 Holmes Run Road, Falls Church, Va. (1951).

Fulford, Dr M., Dept. of Botany, University of Cincinnati, Cincinnati 21, Ohio (1951).

Fuller, A. M., Dept. of Botany, Milwaukee Public Museum, Milwaukee 3, Wisc. (1952).

Funkhouser, J. W., Jersey Production Research Company, 1133 North Lewis Avenue, Tulsa 10, Okla. (1958).

Garay, L. A., Oakes Ames Orchid Herbarium, 22 Divinity Ave., Cambridge 38, Mass. (1958).

Gier, L. J., Dept. of Biology, William Jewell College, Liberty, Mo. (1951).

Gilkey, Dr H. M., 136 N. 30th Street, Corvallis, Ore. (1951).

Gillet, G. W., Dept. of Botany and Plant Pathology, Michigan State University, East Lansing, Mich. (1957).

Gillis, W. T., Dept. of Botany and Plant Pathology, Michigan State University, East Lansing, Mich. (1958).

Gillispie, W. H., Dept. of Botany, West Virginia University, Morgantown, W.Va. (1958).

Godfrey, Dr R. K., Dept. of Botany, Florida State University, Tallahassee, Fla. (1955).

Goodman, Dr G. J., Dept. of Plant Sciences, University of Oklahoma, Norman, Okla. (1951).

Gordon, Dr R. B., Darlington Herbarium, State Teachers College, West Chester, Pa. (1952).

Gould, S. W., Thunder Mill, Opening Hill Road, Madison, Conn. (1957).

Grant, M. L., Iowa State Teachers College, Cedar Falls, Iowa (1951).

Grassl, Dr C. O., Box 156, Canal Point, Fla. (1959).

Gray, Dr J., Geochronology Laboratories, University of Arizona, Tucson, Arizona (PB) (1958).

Gray, N. E., Anatomy Building, Emory University, Atlanta, Ga. (1959).

Grayson, Dr J. F., Magnolia Petroleum Company, Field Research Laboratory, Box 900, Dallas 21, Texas (PB) (1959).

Griffiths, A. Jr., 422 West South Street, Anaheim, Cal. (1954).

Guennel, G. K., Dept. of Conservation, Geological Survey, Indiana University, Bloomington, Ind. (PB) (1955).

Haas, Dr Th. Ph., Philadelphia College of Pharmacy and Science, Philadelphia 4, Pa. (1952).

Hale, M. E., Dept. of Botany, Smithsonian Institution, Washington 25, D.C. (1959).

Halicki, P. J., Dept. of Limnology, The Academy of Natural Sciences of Philadelphia, 19th and the Parkway, Philadelphia 3, Pa. (1958).

Hall, Dr J. W., Dept. of Botany, University of Minnesota, Minneapolis 14, Minn. (PB) (1956).

Hall, Dr M. T., Dept. of Botany, Butler University, Indianapolis, Ind. (1951).

Hanlin, Dr R. T., Dept. of Botany, University of Michigan, Ann Arbor, Mich. (1959).

Hardin, Dr J. W., Dept. of Botany, North Carolina State College, Raleigh, N.C. (1951).

Harvey, Mrs D. R., 5801 Adelaide Ave., San Diego 15, Cal. (1952).

Harvey, Dr L. H., The Herbarium, Montana State University, Missoula, Mont. (1954).

Hatcher, R. E., Dept. of Botany, University of Cincinnati, Cincinnati 21, Ohio (1957).

Hauke, R. L., Dept. of Botany, University of Rhode Island, Kingston, R.I. (1958).

Heckard, L. R., Dept. of Botany, University of Illinois, Urbana, Ill. (1955).

Heiser, Ch. B. Jr., Dept. of Botany, Indiana University, Bloomington, Ind. (1951).

Hendricks, A. J., Dept. of Botany, Southern Illinois University, Carbondale, Ill. (1957).

Henry, Dr L. K., Carnegie Museum, Pittsburg 13, Pa. (1951).

Hermann, Dr F. J., Division of Plant Exploration, Plant Industry Station, Beltsville, Md. (1951).

Hilferty, F. J., Gray Herbarium, 22 Divinity Avenue, Cambridge 38, Mass. (1959).

Hille, F. K., 410 Rose Lane, Lexington, Ky. (1959).

Hiltunen, J., Dept. of Biology, Wayne State University, Detroit 2, Mich. (1958).

Hobbs, C. H., Dept. of Biology, Kent State University, Kent, Ohio (1951).

Hocking, Dr G. M., School of Pharmacy, Alabama Polytechnic Institute, Auburn, Ala. (1954).

Hodge, Dr W. H., Longwood Gardens, Kennett Square, Pa. (1952).

Hoffmeister, W. S., Jersey Production Research Company, 1133 North Lewis Ave., Tulsa 10, Okla. (1958).

Hollensen, R. H., Dept. of Biological Sciences, University of Cincinnati, Cincinnati 21, Ohio (1958).

Holm, Dr R. W., Dudley Herbarium, Natural History Museum, Stanford, Cal. (1951).

Howard, Dr G. E., Dept. of Botany, University of Washington, Seattle 5, Wash. (1951).

Howard, Dr R. A., Arnold Arboretum, 22 Divinity Avenue, Cambridge 38, Mass. (1955).

Howell, Dr J. Th., California Academy of Sciences, Golden Gate Park, San Francisco 18, Cal. (1951).

Hu, Dr S., Arnold Arboretum, 22 Divinity Avenue, Cambridge 38, Mass. (1951).

Hughes, III, G. C., Duke University, Marine Laboratory, Beaufort, North Carolina (1958).

Hulbert, L. C., Dept. of Botany, Kansas State College, Manhattan, Kansas (1956).

Hurst, Dr F. M., Baylor University, Waco, Texas (1959).

Hutchinson, P. C., Botanical Garden, University of California, Berkeley 4, Cal. (1952).

Huttleston, D. G., Longwood Gardens, Kennett Square, Pa. (1951).

Hyypio, P. A., Botanical Gardens, University of Michigan, Ann Arbor, Mich. (1953).

Iltis, H. H., Herbarium, Dept. of Botany, University of Wisconsin, Birge Hall, Madison, Wisc. (1951).

Ingram, J., L.H. Bailey Hortorium, Cornell University, Ithaca, N.Y. (1959).

Irvine, L. M., 106 N. McCullough Street, Urbana, Ill. (1952).

Irwin, H. S., Dept. of Botany, University of Texas, Austin 12, Tex. (1957).

Isely, D., Dept. of Botany, Iowa State College, Ames, Iowa (1951).

Jackson, Dr R. C., Dept. of Botany, The University of Kansas, Lawrence, Kansas (1955).

Jahlonski, Dr E., Apt. A. 52 — Hudson View Gardens, 183rd Street and Pinehurst Avenue, New York 33, N.Y. (1958).

James, Dr Ch. W., Dept. of Botany, University of Georgia, Athens, Ga. (1956).

Jervis, R. N., Dept. of Biology, East Texas State College, Commerce, Tex. (1953).

Johnson, Dr J. H., Dept. of Geology, Colorado School of Mines, Golden, Colo. (PB) (1955).

Johnston, Dr I. M., Arnold Arboretum, Jamaica Plain 30, Mass. (1951).

Johnston, M. C., Dept. of Biology, Sul Ross State College, Alpine, Texas (1955).

Jones, Dr G. Neville, University of Illinois, Dept. of Botany, Urbana, Ill. (1952).

Just, Dr Th., Chicago Natural History Museum, Roosevelt Road and Lake Shore Drive, Chicago 5, Ill. (1952).

Kapadia, Dr Z. J., Dept. of Range and Forestry, Agricultural & Mechanical College of Texas, College Station, Texas (1956).

Keck, Dr D. D., National Science Foundation, Washington 25, D.C. (1951).

Keefe, Rev. A. M., St Norbert College, West De Pere, Wisc. (1951).

Kiem, Stanley C., Fairchild Tropical Gardens, 10901 Old Cutler Road, Miami 56, Fla. (1958).

Kiener, Dr W., 1242 Pawnee Street, Lincoln 2, Neb. (1951).

Kimnach, Mrs M., 5918 Jordan Avenue, El Cerrito 9, Cal. (1957).

Knobloch, I. W., Dept. of Botany and Plant Pathology, Michigan State University, East Lansing, Mich. (1959).

Kobuski, Dr C. E., Arnold Arboretum, 22 Divinity Avenue, Cambridge 38, Mass. (1951).

Koch, Dr L. F., 207 Harker Hall, University of Illinois, Urbana, Ill. (1951).

Koeppen, R., Forest Products Laboratory, Madison 5, Wisconsin (1959).

Korf, Dr R. P., Dept. of Plant Pathology, New York State College of Agriculture, Cornell University, Ithaca, N.Y. (1951).

Kral, R., Herbarium, c/o Dept. of Biology, Florida State University, Tallahassee, Fla. (1958).

Kruckeberg, Dr A. R., Dept. of Botany, University of Washington, Seattle 5, Wash. (1955).

Krukoff, B. A., Merck & Co. Inc., 161 Avenue of the Americas, New York 13, N.Y. (1951).

Kucera, Dr C. L., Dept. of Botany, University of Missouri, Columbia, Mo. (1952).

Lakela, Prof. O., University of Minnesota, Duluth Branch, Duluth 5, Minn. (1952).

Lane, Dr I. E., Dept. of Botany, University of Hawaii, Honolulu 14, Hawaii (1952).

Langman, Miss I. K., 3509 Baring Street, Philadelphia 4, Pa. (1953).

Latimer, I. S., Jr., Geological & Economic Survey, Morgantown, W. Virginia (PB) (1959).

Lawrence, Prof. G. H. M., Bailey Hortorium, Cornell University, Ithaca, N.Y. (1951).

Lawton, Dr E., Botany Department, University of Washington, Seattle 5, Wash. (1956).

LeBlanc, A., Shell Oil Company, P.O. Box 1509, Midland, Tex. (PB) (1958).

Lee, F. P., 7401 Glenbrook Road, Bethesda 14, Md. (1959).

Leffingwell, H. A., Jersey Production Research Company, 1133 North Lewis Ave., Tulsa 10, Okla. (1958).

Leisman, G. A., Dept. of Biology, Kansas Teachers College, Emporia, Kansas (PB) (1959).

Lellinger, D. B., Dept. of Botany, University of Michigan, Ann Arbor, Mich. (1959).

Leonard, E. C., Dept. of Botany, Smithsonian Institution, Washington 25, D.C. (1957).

Leppik, Dr E. E., Plant Introduction Station, Iowa State College, Ames, Iowa (1951).

Lewis, Dr H., Herbarium, Division of Botany, University of California, Los Angeles 24, Cal. (1953).

Lewis, W. H., Dept. of Biology, Stephen F. Austin College, Nacogdoches, Tex. (1952).

Li, Dr H., Morris Arboretum, Chestnut Hill, Philadelphia 18, Pa. (1951).

Little, Dr E. L., Jr., U.S. Dept. of Agriculture, Forest Service, Washington 25, D.C. (1951).

Lloyd, Dr John T., The Lloyd Library and Museum, 309 West Court Street, Cincinnati 2, Ohio (1953).

Loughridge, G. A., Culver Stockton College, Canton, Mo. (1951).

Lowy, Dr B., Dept. of Botany, Louisiana State University, Baton Rouge, La. (1954).

Lundell, Dr C. L., Texas Research Foundation, Renner, Tex. (1951).

McClintock, Miss E., California Academy of Sciences, San Francisco 18, Cal. (1951).

McClure, Dr F. A., 5507 Charles Street, Bethesda, Md. (1955).

McGregor, Prof. R. L., Dept. of Botany, University of Kansas, Lawrence, Kan. (1951).

McVaugh, Dr R., Herbarium, Museum Building, University of Michigan, Ann Arbor, Mich. (1951).

Maguire, Dr B., New York Botanical Garden, Bronx Park, New York 58, N.Y. (1952).

Mamay, Dr S. H., U.S. Geological Survey, 338 U.S. National Museum, Washington 25, D.C. (1954).

Manning, Prof. W. E., Botanical Laboratory, Bucknell University, Lewisburg, Pa. (1958).

Martin, Prof. G. W., Dept. of Botany, State University of Iowa, Iowa City, Iowa (1951).

Martin, J. S., 1321 Bayon Road, Route 2, Bellingham, Wash. (1954).

Mason, Ch. T., Jr., Dept. of Botany, University of Arizona, Tucson, Ariz. (1953).

Mason, Dr H. L., Herbarium of the University of California, Berkeley 4, Cal. (1953).

Mathias, Dr M. E., Div. of Botany, University of California, Los Angeles 24, Cal. (1951).

Mauldin, Miss M. P., Southwestern Seed Service, Route 2, Box 220, Waco, Tex. (1951).

Mehlquist, Prof. G. A. L., Plant Science Dept., University of Connecticut, Storrs, Conn. (1951).

Metz, Sister M. C., Our Lady of the Lake College, San Antonio 7, Tex. (1951).

Meyer, Dr F. G., Plant Introduction Section, U.S. Department of Agriculture, Beltsville, Md. (1952).

Mickel, J. T., Dept. of Botany, University of Michigan, Ann Arbor, Mich. (1958).

Middleton, J. T., Div. of Plant Pathology, University of California, Citrus Experiment Station, Riverside, Cal. (1951).

Miller, A. H., 1103 S.E. 5 Street, Minneapolis 14, Minn. (1956).

Miller, Dr H. A., Dept. of Biology, Duquesne University, Pittsburg 19, Pa. (1955).

Mohlenbrock, R. H., Dept. of Botany, Southern Illinois University, Carbondale, Ill. (1958).

Moldenke, Dr H. N., 15 Glenbrook Avenue, Yonkers 5, N.Y. (1951).

Moore, Dr D. M., 506 Vanderventer Ave., Fayetteville, Ark. (1951).

Moore, Dr H. E., Jr., Bailey Hortorium, Cornell University, Ithaca, N.Y. (1951).

Moran, Dr R. V., Natural History Museum, Balboa Park, San Diego, Cal. (1952).

Morley, Dr Th., Dept. of Botany, University of Minnesota, Minneapolis 14, Minn. (1951).

Morton, Dr C. V., U.S. National Herbarium, Smithsonian Institution, Washington 25, D.C. (1952).

Mosquin, Th., Dept. of Botany, University of California, Los Angeles 24, Cal. (1956).

Mrak, E. M., Food Technology Division, University of California, Davis, Cal. (1952).

Muller, Prof. C. H., University of California, Santa Barbara College, Santa Barbara, Cal. (1951).

Nevling, L. I., Jr., Missouri Botanical Garden, 2315 Tower Grove Avenue, St Louis 10, Mo. (1959).

Nicolson, D. H., L.H. Bailey Hortorium, Cornell University, Ithaca, N.Y. (1959).

Noamesi, G. K., 415 N. Park Street, Madison, Wisc. (1956).

Norman, Miss E. M., 1324 Westview Ave., East Lansing, Mich. (1955).

Ogden, Dr E. C., University of State of New York, New York State Museum, Albany, N.Y. (1951).

Ownbey, Dr G. B., Dept. of Botany, University of Minnesota, Minneapolis, Minn. (1951).

Ownbey, Dr M., Dept. of Botany, State College of Washington, Pullman, Wash. (1951).

Palmatier, E. A., Dept. of Botany, University of Rhode Island, Kingston, R.I. (1951).

Pancho, J. V., Bailey Hortorium, Cornell University, Ithaca, N.Y. (1957).

Papenfuss, Dr G. F., Herbarium of the University of California, Berkeley 4, Cal. (1952).

Parker, Dr K. F., 6014 Kirby Road, Bethesda 14, Md. (1952).

Patrick, Dr R., The Academy of Natural Sciences of Philadelphia, 19th and the Parkway, Philadelphia 3, Pa. (1951).

Payne, W. W., Dept. of Botany, University of Michigan, Ann Arbor, Mich. (1959).

Perdue, Dr R. E., U.S.D.A. New Crops Research Branch, Beltsville, Md. (1954).

Perry, Dr L. M., 22 Divinity Avenue, Cambridge 38, Mass. (1951).

Petersen, R. H., Dept. of Botany, Columbia University, New York 27, N.Y. (1959).

Piehl, M. A., Dept. of Botany, University of Michigan, Ann Arbor, Mich. (1958).

Pierce, R. L., Magnolia Petroleum Company, Box 900, Dallas 21, Texas (PB) (1958).

Pipper, R. W., Dept. of Botany, University of Michigan, Ann Arbor, Mich. (1958).

Poole, Prof. J. P., Dept. of Botany, Dartmouth College, Hanover, New Hampshire (1955).

Porter, Dr C. L., Rocky Mountain Herbarium, University of Wyoming, Laramie, Wyo. (1951).

Potter, D. E., 2814 South Pittsburg, Tulsa 14, Okla. (1959).

Preece, Dr S. J., Dept. of Botany, Montana State University, Missoula, Mont. (1952).

Prescott, G. W., Dept. of Botany and Plant Pathology, Michigan State University, East Lansing, Mich. (1958).

Proskauer, Dr J., Dept. of Botany, University of California, Berkeley, Cal. (1956).

Pursell, R. A., The Pennsylvania State University, School of Forestry, Mont Alto Branch, Mont Alto, Pa. (1958).

Radford, Prof. A. E., Dept. of Botany, University of North Carolina, Chapel Hill, N.C. (1951).

Raven, P. H., Dept. of Botany, University of California, Los Angeles 24, Cal. (1958).

Ray, Prof. J. D., Dept. of Botany, Mississippi State College, State College, Miss. (1956).

Redfearn, Dr P. L., Jr., Southwest Missouri State College, Springfield, Mo. (1959).

Reed, C. F., 10105 Harford Road, Baltimore 34, Md. (1958).

Reed, Prof. F. D., Mount Holyoke College, South Hadley, Mass. (PB) (1955).

Reeder, Dr J. R., Osborn Botanical Laboratory, Yale University, New Haven, Conn. (1951).

Reese, W. D., Dept. of Biology, Southwestern Louisiana Institute, Lafayette, La. (1957).

Reis, Miss S. von, Harvard University Herbarium, 22 Divinity Avenue, Cambridge 38, Mass. (1956).

Ricker, P. L., 3740 Oliver Street, N.W., Washington 15, D.C. (1951).

Rickett, Dr H. W., New York Botanical Garden, Bronx Park, New York 58 (1951).

Roach, A. W., North Texas State College 5232, Denton, Tex. (1951).

Rock, Dr H. F. L., Dept. of Botany, University of Tennessee, Knoxville, Tenn. (1954).

Rogers, C. M., Biology Department, Wayne State University, Detroit 2, Mich. (1958).

Rogers, Dr D. J., New York Botanical Garden, Bronx Park, New York 58, N.Y. (1952).

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Rogerson, C. T., New York Botanical Garden, Bronx Park, New York 58, N.Y. (1951).

Roller, Miss J. W., U.S. Forest Service Herbarium, U.S.D.A., 0106 South Building, Washington 25, D.C. (1958).

Rollins, Dr R. C., Gray Herbarium, 22 Divinity Avenue, Cambridge 38, Mass. (1951).

Rose, L. S., California Academy of Sciences, Golden Gate Park, San Francisco, Cal. (1951).

Rowell, Ch. M., Jr., Box 4075, Texas Technical College, Lubbock, Tex. (1954).

Rudd, Miss V. E., Smithsonian Institution, Dept. of Botany, Washington 25, D.C. (1952).

Rudolph, E. D., Dept. of Botany, Wellesley College, Wellesley, Mass. (1953).

Runyon, R., Runyon Herbarium, P.O. Box 11, Brownsville, Tex. (1952).

Salamun, P. J., 4732 N. Elkhart Avenue, Milwaukee 11, Wisc. (1951).

Sayre, Prof. G., Russell Sage College, Troy, N.Y. (1951).

Scamman, Miss E., Gray Herbarium, Harvard University, 22 Divinity Avenue, Cambridge 38, Mass. (1951).

Schaeffer, R. L., Jr., 30 North 8th Street, Allentown, Pa. (1951).

Schallert, P. O., M.D., P.O. Box 262, Altamonte Springs, Fla. (1958).

Schemel, Dr M. P., Shell Development Company, Technical Services Division, 3737 Bellaire Blvd., Houston 25, Tex. (PB) (1955).

Schmitt, W. L., Smithsonian Institution, U.S. National Museum, Washington 25, D.C. (1952).

Schopf, Dr J. M., Orton Hall, Ohio State University, Columbus 10, Ohio (1951).

Schubert, Dr B. G., Agricultural Research Service, Plant Industry Station, Beltsville, Md. (1952).

Schultes, Dr R. E., Botanical Museum, Harvard University, Cambridge 38, Mass. (1951).

Schuyler, A. E., Dept. of Botany, University of Michigan, Ann Arbor, Mich. (1958).

Schweinfurth, Ch., 11 Boulder Rd., Wellesley Hills, Mass. (1951).

Scott, A. M., 2824 Dante Street, New Orleans 18, La. (1959).

Scott, Mrs E. E., 212 South College Avenue, Oxford, Ohio (1958).

Scott, Dr R. A., U.S. Geological Survey, Bldg. 25, P. & S. Branch, Denver Federal Center, Denver, Colo. (PB) (1955).

Shaffer, R. L., Dept. of Botany, University of Chicago, Chicago 37, Ill. (1952).

Shanks, Prof. R. E., Dept. of Botany, University of Tennessee, Knoxville 16, Tenn. (1952).

Sharp, Dr A. J., Dept. of Botany, University of Tennessee, Knoxville 16, Tenn. (1951).

Shaw, Dr Ch. Gardner, Plant Pathology, State College of Washington, Pullman, Wash. (1954).

Sherff, Dr E. E., 1203 S. Church Street, Hastings, Mich. (1952).

Shetler, S. G., Dept. of Botany, University of Michigan, Ann Arbor, Mich. (1958).

Shinners, Dr L. H., Herbarium, Southern Methodist University, Dallas 5, Tex. (1951).

Shutts, Dr C. F., Wasbash College, Crawfordsville, Ind. (1956).

Silva, Dr P. C., Dept. of Botany, University of Illinois, Urbana, Ill. (1951).

Simmons, Dr E. G., Pioneering Research Division, HQ QM R&D Command, QM R&D Center, US Army, Natick, Mass. (1953).

Smith, Dr A. C., Museum of Natural History, U.S. National Museum, Smithsonian Institution, Washington 25, D.C. (1951).

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Smith, C. F., 2926 Kenmore Place, Santa Barbara, Cal. (1957).

Smith, Dr D. M., Dept. of Botany, University of Kentucky, Lexington, Ky. (1959).

Smith, L. B., U.S. National Herbarium, Smithsonian Institution, Washington, D.C. (1959).

Smith, Mrs L. C., Rt. 4, Box 449, 5045 East Grant Road, Tucson, Ariz. (1953).

Soderstrom, Th. R., Dept. of Botany, Yale University, New Haven, Conn. (1958).

Solheim, W. G., Dept. of Botany, University of Wyoming, Laramie, Wyo. (1952).

Somerville, Miss J., 4762 Second Boulevard, no. 401, c/o Houlena, Detroit 1, Mich. (1959).

Speer, J. M., Osborn Botanical Laboratory, Yale University, New Haven, Conn. (1958).

Stanley, E. A., Dept. of Geology, Pennsylvania State University, University Park, Pa. (PB) (1959).

Steere, W. C., New York Botanical Garden, Bronx Park, New York 58, N.Y. (1954).

Stern, W. L., School of Forestry, Yale University, New Haven 11, Conn. (1954).

Stevenson, J. A., Plant Industry Station, U.S. Dept. of Agriculture, Beltsville, Md. (1951).

Steward, Dr A. N., Oregon State College, Corvallis, Ore. (1951).

Stewart, W. N., Dept. of Botany, University of Illinois, Urbana, Ill. (1959).

Stewart Lowther, Dr J., Dept. of Geology, College of Puget Sound, Tacoma 6, Wash. (PB) (1955).

Steyermark, Dr J. A., 494 North Hill Drive, Barrington, Ill. (1957).

St John, Prof. H., Bishop Museum, Honolulu 17, Hawaii (1954).

Stone, B. C., Dept. of Botany, University of Hawaii, Honolulu 14, Hawaii (1954).

Stone, K. J., 523 E. Mitchell Street, Petoskey, Mich. (1958).

Stoutamire, W. P., Cranbrook Institute of Science, Bloomfield Hills, Mich. (1956).

Stover, L. E., Jersey Production Research Company, 1133 North Lewis Avenue, Tulsa 10, Okla. (1958).

Swallen, Dr J. R., U.S. National Museum, Smithsonian Institution, Washington 25, D.C. (1951).

Tate Ames, H., Pennsylvania State University, 204 Ihlseng Laboratory, University Park, Pa. (PB) (1959).

Taylor, Ch. A., Dept. of Botany, South Dakota State College, Brookings, S. Dak. (1951).

Taylor, Miss J., Dept. of Botany, University of Cincinnati, Cincinnati 21, Ohio (1952).

Templeton, Dr B. C., Los Angeles County Museum, Los Angeles 7, Cal. (1951).

Terrell, E. E., Biology Department, Guilford College, N.C. (1958).

Thiers, H. D., Dept. of Biology, San Francisco State College, 1600 Holloway, San Francisco, Cal. (1952).

Thomas, J. H., 2130 Bowdoin Street, Palo Alto, Cal. (1954).

Thomas, Dr J. L., Arnold Arboretum, Harvard University, Jamaica Plain 30, Mass. (1956).

Thompson, H. J., P.B. 302, Dept. of Botany, University of California, Los Angeles 24, Cal. (1953).

Thomson, Dr J. W., Dept. of Botany, University of Wisconsin, Madison 6, Wisc. (1953).

Thorne, Dr R. F., Dept. of Botany, State University of Iowa, Iowa City, Iowa (1951).

Torrey, Dr G. S., R.F.D. 1, Box 361, Storrs, Conn. (1952).

Totten, Prof. H. R., Dept. of Botany, University of North Carolina, Chapel Hill, N.C. (1951).

Traub, Dr H. P., 5804 Camino de la Costa, La Jolla, Cal. (1951).

Traverse, Dr A., P.O. Box 481, Houston 25, Tex. (PB) (1955).

Tryon, Dr R. M., Jr., Gray Herbarium, Harvard University, 22 Divinity Avenue, Cambridge 38, Mass. (1952).

Tucker, Dr J. M., Botany Division, University of California, College of Agriculture, Davis, Cal. (1952).

Turner, B. L., Dept. of Botany, University of Texas, Austin, Tex. (1952).

Van Schaack, Dr G. B., Missouri Botanical Garden, 2315 Tower Grove Avenue, St Louis 10, Mo. (1951).

Vasek, F. C., Division of Life Sciences, University of California, Riverside, Cal. (1958).

Venard, Dr H., 3959 N. Stratford Road, N.E., Atlanta, Ga. (1952).

Vickery, R. K., Jr., Dept. of Biology, University of Utah, Salt Lake City, Utah (1951).

Vines, R. A., The Museum of Natural History of Houston, P.O. Box 8175, Houston 4, Tex. (1952).

Vinyard, Prof. W. C., Dept. of Botany, Humboldt State College, Arcata, Cal. (1958).

Voss, Dr E. G., 1015 Lincoln Ave., Ann Arbor, Mich. (1952).

Wagner, Dr W. H., Jr., Dept. of Botany, University of Michigan, Ann Arbor, Mich. (1956).

Wahl, Prof. H. A., Dept. of Botany, Pennsylvania State University, University Park, Pa. (1954).

Waldee, Dr E. L., c/o Mrs L. W. Dickinson, 711 Fifth North, Humboldt, Iowa (1951).

Walker, Dr E. H., 7413 Holly Avenue, Takoma Park 12, Md. (1951).

Ward, D. B., Dept. of Botany, Cornell University, Ithaca, N.Y. (1958).

Waterfall, Dr U. T., Oklahoma State University, Stillwater, Okla. (1952).

Waterman, Miss A. H., R.F.D. 1, Lake Leelanau, Mich. (1958).

Weber, Mrs C., Harvard University Herbarium, 22 Divinity Ave., Cambridge 38, Mass. (1958).

Weber, Wm. A., University of Colorado Museum, Boulder, Colo. (1952).

Webster, Dr G. L., Dept. of Biological Sciences, Purdue University, Lafayette, Ind. (1952).

Wehmeyer, Prof. L. E., Dept. of Botany, University of Michigan, Ann Arbor, Mich. (1955).

Welch, Dr W. H., DePauw University, 112 Bloomington Street, Greencastle, Ind. (1951).

Welden, A. L., Dept. of Botany, Tulane University, New Orleans 18, La. (1959).

Welsh, S. L., Dept. of Botany, Iowa State University, Ames, Iowa (1959).

West, Dr E., Herbarium, Agricultural Experiment Station, University of Florida, Gainesville, Fla. (1952).

Westra, L. Y. Th., The New York Botanical Garden, Bronx Park, New York 58, N.Y. (1957).

Wetmore, C. M., Dept. of Botany and Plant Pathology, Michigan State University, East Lansing, Mich. (1958).

Wheeler, Dr L. C., Dept. of Botany, University of S. California, Los Angeles 7, Cal. (1954).

Wherry, Prof. E. T., Dept. of Botany, University of Pennsylvania, Philadelphia 4, Pa. (1951).

Whitehouse, Dr E., Box 739, Southern Methodist University, Dallas 5, Tex. (1953).

Wiens, D., Box no. 448, Walker Hall, Pomona College, Claremont, Cal. (1954).

Wiggins, Dr I. L., Dudley Herbarium, Natural History Museum, Stanford University, Stanford, Cal. (1951).

Wilbur, Dr R. L., Dept. of Botany, Duke University, Durham, N.C. (1956).

Wilkens, H., 424 South 15th Street, Reading, Pa (1951).

Williams, Dr L. O., Agricultural Research Service, Plant Introduction Section, Beltsville, Md. (1951).

Wilson, J. S., Dept. of Botany, University of Michigan, Ann Arbor, Mich. (1958).

Wilson, Dr K. A., Arnold Arboretum, 22 Divinity Avenue, Cambridge 38, Mass. (1954).

Wilson, Th. K., Dept. of Biological Sciences, University of Cincinnati, Cincinnati 21, Ohio (1956).

Wood, Dr C. E., Arnold Arboretum, 22 Divinity Avenue, Cambridge 38, Mass. (1952).

Wood, J. M., Dept. of Botany, University of Missouri, Columbia, Mo. (PB) (1957).

Wood, Dr R. D., Dept. of Botany, University of Rhode Island, Kingston, R.I. (1952).

Woodson, Dr R. E., Jr., Missouri Botanical Garden, 2315 Tower Grove Ave., St Louis 10, Mo. (1953).

Worthley, E. G., Bonita Avenue, Owings Mills, Md. (1959).

Wurdack, J. J., New York Botanical Garden, Bronx Park, New York 58, N.Y. (1952).

Yale Dawson, E., Box 228, R.F.D. 1., Solvang, Cal. (1952).

Youngken, Prof. H. W., Mass. College of Pharmacy, 179 Longwood Ave., Boston 15, Mass. (1955).

Yuncker, Dr T. G., DePauw University, Greencastle, Ind. (1951).
Ziesenhenne, R., 1130 N. Milpas Street, Santa Barbara, Cal. (1957).
Zimmerman, J. H., 2114 Van Hise Ave., Madison 5, Wisc. (1956).

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Kolakowsky, Prof. A., Botanical Garden, Soukhumi (PB) (1958).
Prokhanov, Dr Y. I., Nabereshnaya 35, qu. 10, Makhatchkala, Daghestan (1957).
Schischkin, Prof. B., Institut Botanique Komarov de l'Académie des Sciences de l'U.R.S.S., Leningrad 22 (1955).

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Blohm, H., Apartado 69, Caracas (1958).
Lasser, Dr T., Instituto Botánico, Apartado 2156, Caracas (1952).

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Mayer, Prof. E., Botanicni Institut, Univerze Ljubljana, Ljubljana (1956).

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